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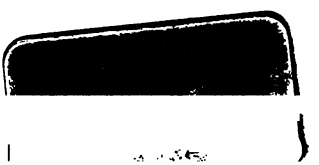
MATHEMATICAL & NAUTICAL TABLES

EVERS.



LOGARITHMIC TABLES.

TABLES,

NAUTICAL AND MATHEMATICAL,

FOR THE USE OF

SEAMEN, STUDENTS, MATHEMATICIANS, &c.,

ARRANGED, CORRECTED, AND SOME RE-CALCULATED.

BY

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PREFACE.

An endeavour has been made to arrange a new set of handy, clear, and correct Mathematical and Nautical Tables, for the use of the Student and expert Practitioner in Mathematics, Navigation, Nautical Astronomy, Steam, Surveying, &c.

It is essentially necessary that a Table of common Logarithms should be perfectly correct; these are therefore drawn from the most trustworthy sources. After comparing the best French and German Tables with the English, it is found that none are better than our own, and in fact, in the majority of cases, they are evidently copied from English works. Hence the best English authorities have been closely followed.

One or two of the minor Tables are new, having been calculated from more accurate formulæ.

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INTRODUCTION.

INTRODUCTION

TO THE

LOGARITHMIC TABLES,

SHEWING HOW THEY ARE USED.

Logarithms are numbers employed to facilitate the process of numerical calculation, and are really indices of roots and powers.

Logarithms generally consist of two parts—the *Index* or Characteristic, and the Mantissa.

The **Index** or **Characteristic** indicates or tells us of how many integrals the corresponding natural number consists. The Index is one less than the number of places or digits. For instance, the Index of the numbers—

2, 23, 234, 2345, 23456, &c., is respectively
0, 1, 2, 3, 4, &c.

The **Mantissa** is the annexed decimal part of the Logarithm; it means something over or thrown in.

Log 2=0·301030 Log 20=1·301030. Log 200=2·301030

Log ·2=$\bar{1}$·301030 Log ·02=$\bar{2}$·301030 Log ·002=$\bar{3}$·301030

In these examples the Mantissa is ·301030, and the Indices the numbers on the left in each case. Observe that in the case of decimals the Index is minus. The Index is unity for the decimal place, and plus *one* for each cypher, but *always* for decimals *a minus quantity*. It is so easy to furnish the Indices, that they are never given in the Tables; the student has to supply them himself.

We will now explain a little more in detail what a Logarithm really is. Starting with a second definition,—*the Logarithm of a number is that power to which the base must be raised to give that number*. For instance, $2^3=8$. Here Logarithm of 8 to the base 2 is 3, because 2 must be raised to the power of 3 to give 8. Again, $3^5=243$; so then Log 243 to the base 3 is 5. The base

used in the majority of cases is 10, because it gives greater facilities in calculations than any other number. $10^3=1000 \therefore \text{Log}_{10}1000=3$. Notice here how the Logarithm is written, and where the 10 is placed. $\text{Log}_3 243=5$ means that the Logarithm of 243 to the base 3 is 5. Again, $\text{Log}_{10} 2=\cdot 201030$; this might have been written $10^{\cdot 201030}=2$. So again, $\text{Log}_{10} 243=2\cdot 385606$; or $10^{2\cdot 385606}=243$, *i. e.*, 10 to the power of 2·385606 gives 243. We are so accustomed to raising 2 to the power of 2 (2^2), or 2 to the power of 3 (2^3), that we do not sufficiently realize the fact that it is possible to raise 2 to the power of ·301030 ($2^{\cdot 301030}$).

We now proceed to shew how integral numbers are taken from the Logarithmic Tables.

(1.) Find from the Tables the logarithms of 291, 2915, 29159, and 291597. Turning to page 21 of the Table of Natural Numbers, we find 291 in the left hand column, and close to it, on the same line to the right, 463893; this is the Mantissa, which is written ·463893; the *decimal* part only is given; as 291 consists of three figures, the Index, being always one less than the number of integers, $\therefore$ Log 291 = 2·463893.

Again, Log 2915 is found on the same page and in the same line as 291, in the column headed 5 at the top (for convenience the 5 is also at the foot); then under 5 we have Log 2915= 3·464639, the characteristic 3 being supplied as before.

The two other Logs are thus found:—

Log 29150=4·464639	149	149	Log 291500=5·464639
9= 134	9	97	97= 144
	1341	1043	
		1341	
Log 29159=4·464773		14453	Log 291597=5·464783

The above process may be thus explained From the Tables we can find the Logarithm of any number consisting of four or less digits, or from 1 to 10000; but the same Tables also give us higher numbers, by supplying, in the extreme *right* hand column, the *proportional difference.* In this right hand column is the proportional difference for every 100, so that, knowing the proportional difference for 100, it is easy to find it for any other number, by multiplying by the number, and marking off a number of decimal places *corresponding to the number by which we multiply.* In the above cases the proportional difference is 149, taken from opposite 291 from the extreme right hand column; this is multiplied by the 9 and 97 respectively; and in the case of 29159 *one* decimal place is omitted, and in the second *two*, the numbers so found are added to the last figures of the Mantissa in each case.

The reverse of the above process is to find the number corresponding to a Logarithm.

Ex. 2. Given 5·608267 and 3·608341, find the natural numbers corresponding to these Logarithms. Turning to the Tables, we find on page 23 of the Table of Natural Numbers the nearest Mantissa *corresponding to and below* ·608267 is ·608205, which gives us the integers 4057.

We place them thus—

```
·608267
·608205
-------
 107)6200(58
     535
     ---
      850
      856
      ===
```

∴ the number is 405758.

We place the one Mantissa under the other and subtract, then look at the right hand side for the proportional difference 107, and divide the remainder by it, after affixing two ciphers to the remainder. If the 107 had been greater than the 6200, then the figures sought would have consisted of cyphers. Again, had we had a remainder after using our two cyphers, we might have still gone on with the division, and annexed a decimal place to the 405758. The number sought is 405758, consisting of *six* integers, because the index is a *five*.

For the natural number for 3·608341, we find the nearest Logarithm below it on p. 23 to be ·608312, corresponding to 4058.

```
·608341
·608312
-------
 107)2900(271
     214
     ---
      760
      749
      ---
      110
      107
      ---
        3
        =
```

∴ the number is 4058·271.

Logarithms greatly facilitate and abbreviate calculations: *multiplication becomes addition; division, subtraction; raising to a power, multiplying, and extracting the root, division.*

Ex.—Multiply 481·05 by 75·7.

Log 481·05 = 2·682190
Log 75·7 = 1·879096

36415·46 = 4·561286

21

119)6500(546
595

550
476

740
714

The two Logarithms are simply added together, and the natural number corresponding to the logarithmic sum taken out. By multiplication the answer would be 36415·485; thus it is seen that we obtain an answer sufficiently near for all practical purposes by a simple and expeditious method; and were the Logarithms carried out further in the Tables, and differences given in decimal fractions, we should obtain an exact answer; but the process would be too tedious, and nothing worth gaining would be attained by it. Such numbers as 75·7, 757, 7·57, 7570, 75700, &c. have all the same Mantissa; so that if we were dealing with all these numbers, only one Mantissa, ·879096, would have to be taken out from the Tables opposite 757.

Ex.—Divide 4876·5 by 9874·6 and by 413·75.

Log 4876·5 = 3·688108
Log 9874·6 = 3·994519

Log ·493843 = $\bar{1}$·693589

51

88)3800(43
352

280
264

16

Log 4876·5 = 3·688108
Log 413·75 = 2·616738

Log 11·7861 = 1·071370

145

370)22500(61
2220

300
370

three figures agree and the second three differ. The figures 43 and 61 are found as in the previous cases. In the left hand example observe particularly how the $\overline{1}$ is obtained 4 from 3 you cannot, then 3 from 4 is —1, written $\overline{1}$. After these examples we shall assume the student thoroughly understands how to find the rest of the integers required in the answer beyond the first four.

Raise 27·1 to the power of 3 4·101 to the power of 5 and 1·7 to the power of ·03.

To the third power.

Log 27·1 = 1·432969

3

Log 19902·4 = $\overline{4}$·298907

To the fifth power.

Log 4·101 = ·612890

5

Log 1159·97 = $\overline{3}$·064450

To the power of ·03.

Log 1·7 = ·230449

·03

Log 1·0164 = ·00691347

Answers, { 19902·4 / 1159·97 / 1·0164

Ex.—Find the square and cube root of 41·874 the ninth root of 442; and the eighth root of the cube of 650. Or the problem may be put thus: Find the value of $41{\cdot}874^{\frac{1}{2}}$, $41{\cdot}874^{\frac{1}{3}}$, $442^{\frac{1}{9}}$, and $650^{\frac{3}{8}}$

Square root.

Log 41·874 = 2)1·621944

Log 6·471 = ·810972

Cube root.

Log 41·874 = 3)1·621944

Log 3·47254 = ·540648

Ninth root.

Log 442 = 9)2·645422

Log 1·9676 = ·293935

Answer, 1·9676

Eighth root of the Cube.

Log 650 = 2·812913

3

8)8·438739

Log 11·346 = 1·054842

Answer, 11·346

Ex.—Find the Cube root of ·425, ·0425 and ·0000425.

Cube root.

Log ·425 = $\overline{1}$·628389 = 3)$\overline{3}$ + 2·628389

Log ·75184 = $\overline{1}$·876129 Answer, ·75184

Log ·0425 = $\overline{2}$·628389 = 3)$\overline{3}$ + 1·628389

Log ·348976 = $\overline{1}$·542796 Answer, ·348976

Log ·0000425 = $\overline{5}$·628399 = 3)$\overline{6}$ + 1·628389

Log ·0348976 = $\overline{2}$·542796 Answer, 0·348976

The point these examples illustrate is this, that when we are finding the root of a decimal quantity we have to increase the index till it is exactly divisible by the integer, and the number by which it is increased has to be carried on as in ordinary division for the next dividend.

The next step will be to shew how the Logarithms of Sines, Cosines, Tangents, Secants, &c., are taken out from the Tables, for Minutes and seconds of Arc.

Ex.—It is required to take out the Logarithmic Sine, Cosecant, Tangent, Cotangent, Secant, and Cosine of 30° 31′ 32″ (p. 63).

Sine.

Log Sin. 30° 31′	= 9·705683	357
32″	= 114	32
∴ Log Sin. 30° 31′ 32″	= 9·705797	714
		1071
		114·24

Cosecant.

Log Cosec. 30° 31′	= 10·294317	357
32″	= 114	32
Log Cosec. 30° 31′ 32″	= 10·294203	714
		1071
		114·24

Tangent.

Tan. 30° 31′	= 9·770437	481
32″	= 154*	32
Tan. 30° 31′ 32″	= 9·770591	962
		1443
		153·92*

Cotangent.

Cot. 30° 31′	= 10·229563	481
32′	= 154	32
Cot. 30° 31′ 32″	= 10·229409	962
		1443
		153·92

	Secant.	
Sec. 30° 31′	= 10·064754	124
32″ =	39	32
Sec. 30° 31′ 32″ =	10·064793	248
		372
		39·68

	Cosine.	
Cos. 30° 31′	= 9·935246	124
32″ =	39	32
Cos. 30° 31′ 32″ =	9·935207	248
		372
		39·68

First observe, that the differences are the same for Sin. and Cosec. ($\frac{1}{\text{Sin.}}$); for Tan. and Cot. ($\frac{1}{\text{Tan.}}$) for Cos. and Sec. ($\frac{1}{\text{Cos.}}$); and in each pair the difference is additive in one case, and subtractive in the other (the Co's.)

Now must be shewn the method of finding the arc or angle corresponding to a given Logarithm. Let the arcs corresponding to (*a*) Log Sin. 9·961195; (*b*) Log Cos. 9·963000; (*c*) Log Tan. 9·616200; and (*d*) Cotan. 9·626500 be required.

(*a*) Looking in the Table of Logarithmic Sines for 9·961195, we find the nearest to it, and *below* it is Sin. 66° 8′, represented by 9·961179, and that the difference is 93 (p. 56).

(*b*) For the Log Cosine 9·963000 we find the nearest, and *above* it is 23° 18′, represented by 9·963054, the difference being 91.

(*c*) For Tan. 9·616200 the nearest *below* it is 22° 27′, represented by 9·615151, difference being 596.

(*d*) The nearest Log Cotangent to 9·626500, and *above* it is 67° 3′, represented by 9·626797, with a difference of 586 (p. 55).

They may be arranged thus to find the seconds:—

Sine.		Cos.	
Log Sin. required,	9·961195	9·963000	
Sin. nearest,	9·961179 = 66°8′17″	9·963054 =	Cos. 23° 18′ 59″
	93)1600(17	91)5400(59	
	93	455	
	670	850	
	651	819	
	19	31	

Tan.	Cotan.
Log Tan. required, 6·916200	9·626500
151=22° 27′ 8″	797=67° 3′ 50″
596)4900(8	586)29700(50
4768	2930
132	400

It is usual to omit, as previously pointed out, the figures that agree.

The nearest Log in each case is taken out, for the *Co.'s* we take the Logarithm *above* the one given; for the *Sines*, *Tans.*, and *Secants*, the nearest *below*.

The number of degrees is to be found at the top or bottom of the page; for instance, 30° at the top, and 59° at the bottom. When the degrees are found at the top of the page, the minutes are seen in the *left* hand column running down the page; but when they are found at the bottom, as from 45° to 90°, then we must look for the minutes in the *right* hand column, from 1′ to 60′, running *up* the page. To know when to add or subtract the difference, you must run your eye down or up the column of Logarithms; and if they are decreasing, subtract; if increasing, then add. For instance, in correcting, to find Log Sin. 30° 31′ 32″: having found 30° at the top of the page and 31′ in the left hand column, I take out 9·705683 the difference is seen between the columns headed Sine and Cosec.; this is taken down and multiplied by the 32; then looking down the column of Sines it is found that they are increasing, therefore the difference, 114, is added,—while, on the contrary, in looking down the column of Cosecants, as in the next case, we find they are decreasing, and so we subtract. When the Logarithm is taken from the bottom of the page, as from 45° to 90°, *you must look up the page* to see if the Logarithms are increasing or decreasing.

Table I., (p. 17).

Table I gives the Logarithmic Sines, Tangents, Secants, &c., for every point and quarter-point of the compass. These Logs. are very useful in windward and current sailing, &c.

Table II (p. 17).

Table II. is the ordinary Logarithmic Table of Natural Numbers, from 1 to 10,000 but from which higher numbers can be found, as we have already explained.

Table III., (p. 33.)

Table III. is the Table of Logarithmic Sines, Cosecants, &c.; it facilitates, to a very great extent, calculations in Navigation, Nautical and Spherical Astronomy, and kindred subjects.

Table IV., (p. 78.)

Table IV. contains the Natural Sines and Cosines. The student must place a decimal point before each if he would use them; but they are of little value, as it is a vast deal easier to use the Logarithmic Sines and Cosines instead. If the Natural Tangent is required, the student must divide the Natural Sine by the Natural Cosine: Cotangent is found by dividing the Cosine by the Sine; the Secant by dividing unity by the Cosine, &c. All these Natural Sines, Cosines, &c., are easily obtained from the Logarithmic.

Tables V. and VI., (p. 88.)

Tables V. and VI. are the Traverse Tables, which are used more by seamen than by any one else—they are of the very greatest importance. The student who wishes to understand the full import of these tables must consult the treatise on Navigation in Collins's Science Series.

Table VII., (p. 149.)

Table VII. is useful in "Lunars" for finding the proportionate change in time corresponding to a change in a lunar distance

Table VIII., (p. 165.)

Table VIII. is the Table of Meridional Parts, used by seamen to work out problems in Mercator's Sailing. They are exceedingly useful; their trustworthiness depends upon the depression to which they are calculated. As the earth is flattened toward the poles, Mercator's Sailing is not to be depended upon in extremely high latitudes; but then this is of no consequence, as no ordinary individual wishes to go there.

Table IX., (p. 171.)

Table IX. contains the Hyperbolic or Natural Logarithms of all numbers from 1 to 1200. They are very useful to students studying Steam, &c. Table IX. continued (p. 175) has been especially calculated for such students to work out problems connected with the horse power and pressure at different grades of expansion. Hyperbolic Logarithms are used in the same manner as the Common Logarithms when multiplying, dividing, &c.

Table X.—Reduction of Latitude—Angle of Vertical, (p. 175.)

Through the spheroidal form of the earth, the radii of the earth are not normals to the earth's surface, except at the poles and equator; the deviation of these radii from the vertical is termed the angle of the vertical. In working out the longitude by lunar observations, these angles are subtracted from the latitude of the observer, to adapt the latitude to the spheroidal shape of the earth; or they are used in correcting the altitude in a lunar distance.

Table XI., (p. 176.)

Table XI. is the Correction to be subtracted from the Altitudes of celestial objects, to allow for the refractive power the atmosphere exerts on rays of light in passing through it.

Table XII., (p. 180.)

Table XII. gives the Depression and Distance of the Visible Horizon due to the elevation of the eye of the spectator above the level of the sea. The Depression or Dip is always subtractive from a given altitude.

Table XIII., (p. 180.)

Table XIII. shews the value in feet per second—from knots per hour; also knots per hour in the feet per second. Take, for instance, 7. If the vessel is going 7 knots per hour, that corresponds to 11.815 feet per second. Again, if a ship is going 7 feet per second, that is at the rate of 4.147 knots per hour.

Table XIV., (p. 180.)

Table XIV. gives the multiples for converting the Common into Natural or Hyperbolic Logarithms, and the Natural or Hyperbolic into Common. The following illustrations of the manner in which they are employed are given:—

Find the Hyperbolic Logarithm of 950. First take the Common Logarithm of 950=2.977724.

2.	=	4.605170
9	=	2.0723266
7	=	.1611809
7	=	161180
7	=	16118
2	=	460
4	=	92
Log e 950	=	6.8564625

Find the Common Logarithm of 960, given that the Hyperbolic Logarithm is 6.866933.

6.	=	2.605767
8	=	3474356
6	=	260576
6	=	26057
9	=	3908
3	=	130
3	=	13
Log_{10} 960	=	2.9822710

TABLE XV., (p. 181)

Table XV. saves a little trouble when degrees, minutes, and seconds of arc have to be converted into time, or *vice versa*, when time has to be converted into arc.

TABLE XVI., (p. 182.)

Table XVI. contains the Parallax of the Planets in Altitude, which has to be subtracted from the refraction, or else added to the Altitude of the Planets, after the refraction has been subtracted.

TABLE XVII., (p. 183.)

Table XVII. is part of Table XII. repeated for convenience.

TABLE XVIII., (p. 183.)

Table XVIII. contains the Reduction for the Moon's Equatorial Parallax. The student will not be able to fully comprehend this and the following tables, until he is some way advanced in the study of Nautical Astronomy. A work on the subject will be found in Collins's Science Series. The parallax of the moon found in the *Nautical Almanac* is calculated with the equatorial radius of the earth; and as the spectator is generally in other latitudes, this parallax has to be reduced according to the latitude, for wherever else he may be, his radius is less.

TABLE XIX., (p. 183.)

Table XIX. is to Correct the Altitude of the Sun for Parallax, and is always to be added.

Table XX., (p. 184.)

Table XX., or the Augmentation of the Moon's Semi-diameter, is a correction to be applied to observed altitudes of the moon. The semi-diameter of the moon given in the *Nautical Almanac* for any day is the apparent semi-diameter when seen in the horizon; but as the moon rises in the heavens her apparent semi-diameter increases; therefore, to find the true semi-diameter, to enable the student to correct an apparent altitude, we must increase it by the quantity in the tables corresponding to the given semi-diameter and altitude.

Table XXI., (p. 185.)

Table of every point and quarter point of the compass.

TABLE I.

LOGARITHMIC SINES, TANGENTS, AND SECANTS, TO EVERY POINT AND QUARTER POINT OF THE COMPASS.

TABLE II.

LOGARITHMS OF COMMON NUMBERS, FROM 1 TO 10,000.

TABLE I.

LOGARITHMIC SINES, TANGENTS, AND SECANTS, TO EVERY POINT AND QUARTER POINT OF THE COMPASS.

Points.	Sine.	Cosine.	Tangent.	Cotang.	Secant.	Cosec.	Points.
0	0.000000	10.000000	0.000000	Infinite.	10.000000	Infinite.	8
0¼	8.690796	9.999477	8.691319	11.308681	10.000523	11.309204	7¾
0½	8.991302	9.997904	8.993398	11.006602	10.002096	11.008698	7½
0¾	9.166520	9.995274	9.171247	10.828753	10.004726	10.833480	7¼
1	9.290236	9.991574	9.298662	10.701338	10.008426	10.709764	7
1¼	9.385571	9.986786	9.398785	10.601215	10.013214	10.614429	6¾
1½	9.462824	9.980885	9.481939	10.518061	10.019115	10.537176	6½
1¾	9.527488	9.973841	9.553647	10.446353	10.026159	10.472512	6¼
2	9.528840	9.965615	9.617224	10.382776	10.034385	10.417160	6
2¼	9.630992	9.956163	9.674829	10.325171	10.043837	10.369008	5¾
2½	9.673387	9.945430	9.727957	10.272043	10.054570	10.326613	5½
2¾	9.711050	9.933350	9.777700	10.222300	10.066650	10.288950	5¼
3	9.744739	9.919846	9.824893	10.175107	10 080154	10.255261	5
3¼	9.775027	9.904828	9.870199	10.129801	10.095172	10.224973	4¾
3½	9.802359	9.888185	9.914173	10.085827	10.111815	10.197641	4½
3¾	9.827084	9.869790	9.957295	10.042705	10.130210	10.172916	4¼
4	9.849485	9.849485	10.000000	10.000000	10.150515	10.150515	4
	Cosine.	Sine.	Cotang.	Tangent.	Cosec.	Secant.	

TABLE II.

LOGARITHMS OF NUMBERS.

No.	Log.	No.	Log.	No.	Log.	No.	Log.	No.	Log.
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3	0.477121	23	1.361728	43	1.633468	63	1.799341	83	1.919078
4	0.602060	24	1.380211	44	1.643453	64	1.806180	84	1.924279
5	0.698970	25	1.397940	45	1.653213	65	1.812913	85	1.929419
6	0.778151	26	1.414973	46	1.662758	66	1.819544	86	1.934498
7	0.845098	27	1.431364	47	1.672098	67	1.826075	87	1.939519
8	0.903090	28	1.447158	48	1.681241	68	1.832509	88	1.944483
9	0.954243	29	1.462398	49	1.690196	69	1.838849	89	1.949390
10	1.000000	30	1.477121	50	1.698970	70	1.845098	90	1.954243
11	1.041393	31	1.491362	51	1.707570	71	1.851258	91	1.959041
12	1.079181	32	1.505150	52	1.716003	72	1.857332	92	1.963788
13	1.113943	33	1.518514	53	1.724276	73	1.863323	93	1.968483
14	1.146128	34	1.531479	54	1.732394	74	1.869232	94	1.973128
15	1.176091	35	1.544068	55	1.740363	75	1.875061	95	1.977724
16	1.204120	36	1.556303	56	1.748188	76	1.880814	96	1.982271
17	1.230449	37	1.568202	57	1.755875	77	1.886491	97	1.986772
18	1.255273	38	1.579784	58	1.763428	78	1.892095	98	1.991226
19	1.278754	39	1.591065	59	1.770852	79	1.897627	99	1.995635
20	1.301030	40	1.602060	60	1.778151	80	1.903090	100	2.000000
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2	8600	9026	9451	9876	010300	010724	011147	011570	011993	012415	424
3	012837	013259	013680	014100	4521	4940	5360	5779	6197	6616	420
4	7033	7451	7868	8284	8700	9116	9532	9947	020361	020775	416
5	021189	021603	022016	022428	022841	023252	023664	024075	4486	4896	412
6	5306	5715	6125	6533	6942	7350	7757	8164	8571	8978	408
7	9384	9789	030195	030600	031004	031408	031812	032216	032619	033021	404
8	033424	033826	4227	4628	5029	5430	5830	6230	6629	7028	400
9	7426	7825	8223	8620	9017	9414	9811	040207	040602	040998	397
110	041393	041787	042182	042576	042969	043362	043755	044148	044540	044932	393
1	5323	5714	6105	6495	6885	7275	7664	8053	8442	8830	390
2	9216	9606	9993	050380	050766	051153	051538	051924	052309	052694	386
3	053078	053463	053846	4230	4613	4996	5378	5760	6142	6524	383
4	6905	7286	7666	8046	8426	8805	9185	9563	9942	060320	379
5	060698	061075	061452	061829	062206	062582	062958	063333	063709	4083	376
6	4458	4832	5206	5580	5953	6326	6699	7071	7443	7815	373
7	8186	8557	8928	9298	9668	070038	070407	070776	071145	071514	370
8	071882	072250	072617	072985	073352	3718	4085	4451	4816	5182	367
9	5547	5912	6276	6640	7004	7368	7731	8094	8457	8819	363
120	079181	079543	079904	080266	080626	080987	081347	081707	082067	082426	360
1	082785	083144	083503	3861	4219	4576	4934	5291	5647	6004	357
2	6360	6716	7071	7426	7781	8136	8490	8845	9198	9552	355
3	9905	090258	090611	090963	091315	091667	092018	092370	092721	093071	352
4	093422	3772	4122	4471	4820	5169	5518	5866	6215	6562	349
5	6910	7257	7604	7951	8298	8644	8990	9335	9681	100026	346
6	100371	100715	101059	101403	101747	102091	102434	102777	103119	3462	343
7	3804	4146	4487	4828	5169	5510	5851	6191	6531	6871	341
8	7210	7549	7888	8227	8565	8903	9241	9579	9916	110253	338
9	110590	110926	111263	111599	111934	112270	112605	112940	113275	3609	335
130	113943	114277	114611	114944	115278	115611	115943	116276	116608	116940	333
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2	120574	120903	121231	121560	121888	122216	122544	122871	123198	3525	328
3	3852	4178	4504	4830	5156	5481	5806	6131	6456	6781	325
4	7105	7429	7753	8076	8399	8722	9045	9368	9690	130012	323
5	130334	130655	130977	131298	131619	131939	132260	132580	132900	3219	321
6	3539	3858	4177	4496	4814	5133	5451	5769	6086	6403	318
7	6721	7037	7354	7671	7987	8303	8618	8934	9249	9564	316
8	9879	140194	140508	140822	141136	141450	141763	142076	142389	142702	314
9	143015	3327	3639	3951	4263	4574	4885	5196	5507	5818	311
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1	9219	9527	9835	150142	150449	150756	151063	151370	151676	151982	307
2	152288	152594	152900	3205	3510	3815	4120	4424	4728	5032	305
3	5336	5640	5943	6246	6549	6852	7154	7457	7759	8061	303
4	8362	8664	8965	9266	9567	9868	160168	160469	160769	161068	301
5	161368	161667	161967	162266	162564	162863	3161	3460	3758	4055	299
6	4353	4650	4947	5244	5541	5838	6134	6430	6726	7022	297
7	7317	7613	7908	8203	8497	8792	9086	9380	9674	9968	295
8	170262	170555	170848	171141	171434	171726	172019	172311	172603	172895	293
9	3186	3478	3769	4060	4351	4641	4932	5222	5512	5802	291
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1	8977	9264	9552	9839	180126	180413	180699	180986	181272	181558	287
2	181844	182129	182415	182700	2985	3270	3555	3839	4123	4407	285
3	4691	4975	5259	5542	5825	6108	6391	6674	6956	7239	283
4	7521	7803	8084	8366	8647	8928	9209	9490	9771	190051	281
5	190332	190612	190892	191171	191451	191730	192010	192289	192567	2846	279
6	3125	3403	3681	3959	4237	4514	4792	5069	5346	5623	278
7	5900	6176	6453	6729	7005	7281	7556	7832	8107	8382	276
8	8657	8932	9206	9481	9755	200029	200303	200577	200850	201124	274
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2	9515	9783	210051	210319	210586	210853	211121	211388	211654	211921	267
3	212188	212454	2720	2986	3252	3518	3783	4049	4314	4579	266
4	4844	5109	5373	5638	5902	6166	6430	6694	6957	7221	264
5	7484	7747	8010	8273	8536	8798	9060	9323	9585	9846	262
6	220108	220370	220631	220892	221153	221414	221675	221936	222196	222456	261
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9	7887	8144	8400	8657	8913	9170	9426	9682	9938	230193	256
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2	5528	5781	6033	6285	6537	6789	7041	7292	7544	7795	252
3	8046	8297	8548	8799	9049	9299	9550	9800	240050	240300	250
4	240549	240799	241048	241297	241546	241795	242044	242293	2541	2790	249
5	3038	3286	3534	3782	4030	4277	4525	4772	5019	5266	248
6	5513	5759	6006	6252	6499	6745	6991	7237	7482	7728	246
7	7973	8219	8464	8709	8954	9198	9443	9687	9932	250176	245
8	250420	250664	250908	251151	251395	251638	251881	252125	252368	2610	243
9	2853	3096	3338	3580	3822	4064	4306	4548	4790	5031	242
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5	7172	7406	7641	7875	8110	8344	8578	8812	9046	9279	234
6	9513	9746	9980	270213	270446	270679	270912	271144	271377	271609	233
7	271842	272074	272306	2538	2770	3001	3233	3464	3696	3927	232
8	4158	4389	4620	4850	5081	5311	5542	5772	6002	6232	230
9	6462	6692	6921	7151	7380	7609	7838	8067	8296	8525	229
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1	281033	281261	281488	281715	281942	282169	2396	2622	2849	3075	227
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3	5557	5782	6007	6232	6456	6681	6905	7130	7354	7578	225
4	7802	8026	8249	8473	8696	8920	9143	9366	9589	9812	223
5	290035	290257	290480	290702	290925	291147	291369	291591	291813	292034	222
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7	4466	4687	4907	5127	5347	5567	5787	6007	6226	6446	220
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9	8853	9071	9289	9507	9725	9943	300161	300378	300595	300813	218
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5	311754	311966	2177	2389	2600	2812	3023	3234	3445	3656	211
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3	8305	8500	8694	8889	9083	9278	9472	9666	9860	350054	194
4	350248	350442	350636	350829	351023	351216	351410	351603	351796	1989	193
5	2183	2375	2568	2761	2954	3147	3339	3532	3724	3916	193
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7	6026	6217	6408	6599	6790	6981	7172	7363	7554	7744	191
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2	5488	5675	5862	6049	6236	6423	6610	6796	6983	7169	187
3	7356	7542	7729	7915	8101	8287	8473	8659	8845	9030	186
4	9216	9401	9587	9772	9958	370143	370328	370513	370698	370883	185
5	371068	371253	371437	371622	371806	1991	2175	2360	2544	2728	184
6	2912	3096	3280	3464	3647	3831	4015	4198	4382	4565	184
7	4748	4932	5115	5298	5481	5664	5846	6029	6212	6394	183
8	6577	6759	6942	7124	7306	7488	7670	7852	8034	8216	182
9	8398	8580	8761	8943	9124	9306	9487	9668	9849	380030	181
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4	7390	7568	7746	7923	8101	8279	8456	8634	8811	8989	178
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6	390935	391112	391288	391464	391641	1817	1993	2169	2345	2521	176
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9	6199	6374	6548	6722	6896	7071	7245	7419	7592	7766	174
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7	9933	410102	410271	410440	410609	410777	410946	411114	411283	411451	169
8	411620	1788	1956	2124	2293	2461	2629	2796	2964	3132	168
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7	6511	6674	6836	6999	7161	7324	7486	7648	7811	7973	162
8	8135	8297	8459	8621	8783	8944	9106	9268	9429	9591	162
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5	9333	9491	9648	9806	9964	440122	440279	440437	440594	440752	158
6	440909	441066	441224	441381	441538	1695	1852	2009	2166	2323	157
7	2480	2637	2793	2950	3106	3263	3419	3576	3732	3889	157
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1443	1586	1729	1872	2016	2159	2302	2445	2588	2731	143
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4300	4442	4585	4727	4869	5011	5153	5295	5437	5579	142
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8	5848	5966	6084	6202	6320	6437	6555	6673	6791	6909	118
9	7026	7144	7262	7379	7497	7614	7732	7849	7967	8084	118
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7	8791	8900	9009	9119	9228	9337	9446	9556	9665	9774	109
8	9883	9992	600101	600210	600319	600428	600537	600646	600755	600864	109
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7	9594	9701	9808	9914	610021	610128	610234	610341	610447	610554	107
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6	9093	9198	9302	9406	9511	9615	9719	9824	9928	620032	104
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8	1444	1545	1647	1748	1849	1951	2052	2153	2255	2356	101
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5	6694	6785	6876	6968	7059	7151	7242	7333	7424	7516	91
6	7607	7698	7789	7881	7972	8063	8154	8245	8336	8427	91
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8	9428	9519	9610	9700	9791	9882	9973	680063	680154	680245	91
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6	4151	4236	4322	4408	4494	4579	4665	4751	4837	4922	86
7	5008	5094	5179	5265	5350	5436	5522	5607	5693	5778	86
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5	1807	1892	1976	2060	2144	2229	2313	2397	2481	2566	84
6	2650	2734	2818	2902	2986	3070	3154	3238	3323	3407	84
7	3491	3575	3659	3742	3826	3910	3994	4078	4162	4246	84
8	4330	4414	4497	4581	4665	4749	4833	4916	5000	5084	84
9	5167	5251	5335	5418	5502	5586	5669	5753	5836	5920	84
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2	7671	7754	7837	7920	8003	8086	8169	8253	8336	8419	83
3	8502	8585	8668	8751	8834	8917	9000	9083	9165	9248	83
4	9331	9414	9497	9580	9663	9745	9828	9911	9994	720077	83
5	720159	720242	720325	720407	720490	720573	720655	720738	720821	0903	83
6	0986	1068	1151	1233	1316	1398	1481	1563	1646	1728	82
7	1811	1893	1975	2058	2140	2222	2305	2387	2469	2552	82
8	2634	2716	2798	2881	2963	3045	3127	3209	3291	3374	82
9	3456	3538	3620	3702	3784	3866	3948	4030	4112	4194	82
530	724276	724358	724440	724522	724604	724685	724767	724849	724931	725013	82
1	5095	5176	5258	5340	5422	5503	5585	5667	5748	5830	82
2	5912	5993	6075	6156	6238	6320	6401	6483	6564	6646	82
3	6727	6809	6890	6972	7053	7134	7216	7297	7379	7460	81
4	7541	7623	7704	7785	7866	7948	8029	8110	8191	8273	81
5	8354	8435	8516	8597	8678	8759	8841	8922	9003	9084	81
6	9165	9246	9327	9408	9489	9570	9651	9732	9813	9893	81
7	9974	730055	730136	730217	730298	730378	730459	730540	730621	730702	81
8	730782	0863	0944	1024	1105	1186	1266	1347	1428	1508	81
9	1589	1669	1750	1830	1911	1991	2072	2152	2233	2313	81
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4	5599	5679	5759	5838	5918	5998	6078	6157	6237	6317	80
5	6397	6476	6556	6635	6715	6795	6874	6954	7034	7113	80
6	7193	7272	7352	7431	7511	7590	7670	7749	7829	7908	79
7	7987	8067	8146	8225	8305	8384	8463	8543	8622	8701	79
8	8781	8860	8939	9018	9097	9177	9256	9335	9414	9493	79
9	9572	9651	9731	9810	9889	9968	740047	740126	740205	740284	79
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1	1152	1230	1309	1388	1467	1546	1624	1703	1782	1860	79
2	1939	2018	2096	2175	2254	2332	2411	2489	2568	2647	79
3	2725	2804	2882	2961	3039	3118	3196	3275	3353	3431	78
4	3510	3588	3667	3745	3823	3902	3980	4058	4136	4215	78
5	4293	4371	4449	4528	4606	4684	4762	4840	4919	4997	78
6	5075	5153	5231	5309	5387	5465	5543	5621	5699	5777	78
7	5855	5933	6011	6089	6167	6245	6323	6401	6479	6556	78
8	6634	6712	6790	6868	6945	7023	7101	7179	7256	7334	78
9	7412	7489	7567	7645	7722	7800	7878	7955	8033	8110	78
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1	8963	9040	9118	9195	9272	9350	9427	9504	9582	9659	77
2	9736	9814	9891	9968	750045	750123	750200	750277	750354	750431	77
3	750508	750586	750663	750740	0817	0894	0971	1048	1125	1202	77
4	1279	1356	1433	1510	1587	1664	1741	1818	1895	1972	77
5	2048	2125	2202	2279	2356	2433	2509	2586	2663	2740	77
6	2816	2893	2970	3047	3123	3200	3277	3353	3430	3506	77
7	3583	3660	3736	3813	3889	3966	4042	4119	4195	4272	77
8	4348	4425	4501	4578	4654	4730	4807	4883	4960	5036	76
9	5112	5189	5265	5341	5417	5494	5570	5646	5722	5799	76
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2	7396	7472	7548	7624	7700	7775	7851	7927	8003	8079	76
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4	8912	8988	9063	9139	9214	9290	9366	9441	9517	9592	76
5	9668	9743	9819	9894	9970	760045	760121	760196	760272	760347	75
6	760422	760498	760573	760649	760724	0799	0875	0950	1025	1101	75
7	1176	1251	1326	1402	1477	1552	1627	1702	1778	1853	75
8	1928	2003	2078	2153	2228	2303	2378	2453	2529	2604	75
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2	4923	4998	5072	5147	5221	5296	5370	5445	5520	5594	75
3	5669	5743	5818	5892	5966	6041	6115	6190	6264	6338	74
4	6413	6487	6562	6636	6710	6785	6859	6933	7007	7082	74
5	7156	7230	7304	7379	7453	7527	7601	7675	7749	7823	74
6	7898	7972	8046	8120	8194	8268	8342	8416	8490	8564	74
7	8638	8712	8786	8860	8934	9008	9082	9156	9230	9303	74
8	9377	9451	9525	9599	9673	9746	9820	9894	9968	770042	74
9	770115	770189	770263	770336	770410	770484	770557	770631	770705	0778	74
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1	1587	1661	1734	1808	1881	1955	2028	2102	2175	2248	73
2	2322	2395	2468	2542	2615	2688	2762	2835	2908	2981	73
3	3055	3128	3201	3274	3348	3421	3494	3567	3640	3713	73
4	3786	3860	3933	4006	4079	4152	4225	4298	4371	4444	73
5	4517	4590	4663	4736	4809	4882	4955	5028	5100	5173	73
6	5246	5319	5392	5465	5538	5610	5683	5756	5829	5902	73
7	5974	6047	6120	6193	6265	6338	6411	6483	6556	6629	73
8	6701	6774	6846	6919	6992	7064	7137	7209	7282	7354	73
9	7427	7499	7572	7644	7717	7789	7862	7934	8006	8079	72
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2	9596	9669	9741	9813	9885	9957	780029	780101	780173	780245	72
3	780317	780389	780461	780533	780605	780677	0749	0821	0893	0965	72
4	1037	1109	1181	1253	1324	1396	1468	1540	1612	1684	72
5	1755	1827	1899	1971	2042	2114	2186	2258	2329	2401	72
6	2473	2544	2616	2688	2759	2831	2902	2974	3046	3117	72
7	3189	3260	3332	3403	3475	3546	3618	3689	3761	3832	71
8	3904	3975	4046	4118	4189	4261	4332	4403	4475	4546	71
9	4617	4689	4760	4831	4902	4974	5045	5116	5187	5259	71
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1	6041	6112	6183	6254	6325	6396	6467	6538	6609	6680	71
2	6751	6822	6893	6964	7035	7106	7177	7248	7319	7390	71
3	7460	7531	7602	7673	7744	7815	7885	7956	8027	8098	71
4	8168	8239	8310	8381	8451	8522	8593	8663	8734	8804	71
5	8875	8946	9016	9087	9157	9228	9299	9369	9440	9510	71
6	9581	9651	9722	9792	9863	9933	790004	790074	790144	790215	70
7	790285	790356	790426	790496	790567	790637	0707	0778	0848	0918	70
8	0988	1059	1129	1199	1269	1340	1410	1480	1550	1620	70
9	1691	1761	1831	1901	1971	2041	2111	2181	2252	2322	70
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4	5185	5254	5324	5393	5463	5532	5602	5672	5741	5811	70
5	5880	5949	6019	6088	6158	6227	6297	6366	6436	6505	69
6	6574	6644	6713	6782	6852	6921	6990	7060	7129	7198	69
7	7268	7337	7406	7475	7545	7614	7683	7752	7821	7890	69
8	7960	8029	8098	8167	8236	8305	8374	8443	8513	8582	69
9	8651	8720	8789	8858	8927	8996	9065	9134	9203	9272	69
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2	0717	0786	0854	0923	0992	1061	1129	1198	1266	1335	69
3	1404	1472	1541	1609	1678	1747	1815	1884	1952	2021	69
4	2089	2158	2226	2295	2363	2432	2500	2568	2637	2705	68
5	2774	2842	2910	2979	3047	3116	3184	3252	3321	3389	68
6	3457	3525	3594	3662	3730	3798	3867	3935	4003	4071	68
7	4139	4208	4276	4344	4412	4480	4548	4616	4685	4753	68
8	4821	4889	4957	5025	5093	5161	5229	5297	5365	5433	68
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2	7535	7603	7670	7738	7806	7873	7941	8008	8076	8143	68
3	8211	8279	8346	8414	8481	8549	8616	8684	8751	8818	67
4	8886	8953	9021	9088	9156	9223	9290	9358	9425	9492	67
5	9560	9627	9694	9762	9829	9896	9964	810031	810098	810165	67
6	810233	810300	810367	810434	810501	810569	810636	0703	0770	0837	67
7	0904	0971	1039	1106	1173	1240	1307	1374	1441	1508	67
8	1575	1642	1709	1776	1843	1910	1977	2044	2111	2178	67
9	2245	2312	2379	2445	2512	2579	2646	2713	2780	2847	67
650	812913	812980	813047	813114	813181	813247	813314	813381	813448	813514	67
1	3581	3648	3714	3781	3848	3914	3981	4048	4114	4181	67
2	4248	4314	4381	4447	4514	4581	4647	4714	4780	4847	67
3	4913	4980	5046	5113	5179	5246	5312	5378	5445	5511	66
4	5578	5644	5711	5777	5843	5910	5976	6042	6109	6175	66
5	6241	6308	6374	6440	6506	6573	6639	6705	6771	6838	66
6	6904	6970	7036	7102	7169	7235	7301	7367	7433	7499	66
7	7565	7631	7698	7764	7830	7896	7962	8028	8094	8160	66
8	8226	8292	8358	8424	8490	8556	8622	8688	8754	8820	66
9	8885	8951	9017	9083	9149	9215	9281	9346	9412	9478	66
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1	820201	820267	820333	820399	820464	820530	820595	0661	0727	0792	66
2	0858	0924	0989	1055	1120	1186	1251	1317	1382	1448	66
3	1514	1579	1645	1710	1775	1841	1906	1972	2037	2103	65
4	2168	2233	2299	2364	2430	2495	2560	2626	2691	2756	65
5	2822	2887	2952	3018	3083	3148	3213	3279	3344	3409	65
6	3474	3539	3605	3670	3735	3800	3865	3930	3996	4061	65
7	4126	4191	4256	4321	4386	4451	4516	4581	4646	4711	65
8	4776	4841	4906	4971	5036	5101	5166	5231	5296	5361	65
9	5426	5491	5556	5621	5686	5751	5815	5880	5945	6010	65
670	826075	826140	826204	826269	826334	826399	826464	826528	826593	826658	65
1	6723	6787	6852	6917	6981	7046	7111	7175	7240	7305	65
2	7369	7434	7499	7563	7628	7692	7757	7821	7886	7951	65
3	8015	8080	8144	8209	8273	8338	8402	8467	8531	8595	64
4	8660	8724	8789	8853	8918	8982	9046	9111	9175	9239	64
5	9304	9368	9432	9497	9561	9625	9690	9754	9818	9882	64
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7	830589	0653	0717	0781	0845	0909	0973	1037	1102	1166	64
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9	1870	1934	1998	2062	2126	2189	2253	2317	2381	2445	64
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4	5056	5120	5183	5247	5310	5373	5437	5500	5564	5627	63
5	5691	5754	5817	5881	5944	6007	6071	6134	6197	6261	63
6	6324	6387	6451	6514	6577	6641	6704	6767	6830	6894	63
7	6957	7020	7083	7146	7210	7273	7336	7399	7462	7525	63
8	7588	7652	7715	7778	7841	7904	7967	8030	8093	8156	63
9	8219	8282	8345	8408	8471	8534	8597	8660	8723	8786	63
690	838849	838912	838975	839038	839101	839164	839227	839289	839352	839415	63
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5	1985	2047	2110	2172	2235	2297	2360	2422	2484	2547	62
6	2609	2672	2734	2796	2859	2921	2983	3046	3108	3170	62
7	3233	3295	3357	3420	3482	3544	3606	3669	3731	3793	62
8	3855	3918	3980	4042	4104	4166	4229	4291	4353	4415	62
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1	5718	5780	5842	5904	5966	6028	6090	6151	6213	6275	62
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3	6955	7017	7079	7141	7202	7264	7326	7388	7449	7511	62
4	7573	7634	7696	7758	7819	7881	7943	8004	8066	8128	62
5	8189	8251	8312	8374	8435	8497	8559	8620	8682	8743	62
6	8805	8866	8928	8989	9051	9112	9174	9235	9297	9358	61
7	9419	9481	9542	9604	9665	9726	9788	9849	9911	9972	61
8	850033	850095	850156	850217	850279	850340	850401	850462	850524	850585	61
9	0646	0707	0769	0830	0891	0952	1014	1075	1136	1197	61
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1	1870	1931	1992	2053	2114	2175	2236	2297	2358	2419	61
2	2480	2541	2602	2663	2724	2785	2846	2907	2968	3029	61
3	3090	3150	3211	3272	3333	3394	3455	3516	3577	3637	61
4	3698	3759	3820	3881	3941	4002	4063	4124	4185	4245	61
5	4306	4367	4428	4488	4549	4610	4670	4731	4792	4852	61
6	4913	4974	5034	5095	5156	5216	5277	5337	5398	5459	61
7	5519	5580	5640	5701	5761	5822	5882	5943	6003	6064	61
8	6124	6185	6245	6306	6366	6427	6487	6548	6608	6668	60
9	6729	6789	6850	6910	6970	7031	7091	7152	7212	7272	60
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3	9138	9198	9258	9318	9379	9439	9499	9559	9619	9679	60
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5	860338	860398	860458	860518	860578	0637	0697	0757	0817	0877	60
6	0937	0996	1056	1116	1176	1236	1295	1355	1415	1475	60
7	1534	1594	1654	1714	1773	1833	1893	1952	2012	2072	60
8	2131	2191	2251	2310	2370	2430	2489	2549	2608	2668	60
9	2728	2787	2847	2906	2966	3025	3085	3144	3204	3263	60
730	863323	863382	863442	863501	863561	863620	863680	863739	863799	863858	59
1	3917	3977	4036	4096	4155	4214	4274	4333	4392	4452	59
2	4511	4570	4630	4689	4748	4808	4867	4926	4985	5045	59
3	5104	5163	5222	5282	5341	5400	5459	5519	5578	5637	59
4	5696	5755	5814	5874	5933	5992	6051	6110	6169	6228	59
5	6287	6346	6405	6465	6524	6583	6642	6701	6760	6819	59
6	6878	6937	6996	7055	7114	7173	7232	7291	7350	7409	59
7	7467	7526	7585	7644	7703	7762	7821	7880	7939	7998	59
8	8056	8115	8174	8233	8292	8350	8409	8468	8527	8586	59
9	8644	8703	8762	8821	8879	8938	8997	9056	9114	9173	59
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2	870404	870462	870521	870579	0638	0696	0755	0813	0872	0930	58
3	0989	1047	1106	1164	1223	1281	1339	1398	1456	1515	58
4	1573	1631	1690	1748	1806	1865	1923	1981	2040	2098	58
5	2156	2215	2273	2331	2389	2448	2506	2564	2622	2681	58
6	2739	2797	2855	2913	2972	3030	3088	3146	3204	3262	58
7	3321	3379	3437	3495	3553	3611	3669	3727	3785	3844	58
8	3902	3960	4018	4076	4134	4192	4250	4308	4366	4424	58
9	4482	4540	4598	4656	4714	4772	4830	4888	4945	5003	58
750	875061	875119	875177	875235	875293	875351	875409	875466	875524	875582	58
1	5640	5698	5756	5813	5871	5929	5987	6045	6102	6160	58
2	6218	6276	6333	6391	6449	6507	6564	6622	6680	6737	58
3	6795	6853	6910	6968	7026	7083	7141	7199	7256	7314	58
4	7371	7429	7487	7544	7602	7659	7717	7774	7832	7889	58
5	7947	8004	8062	8119	8177	8234	8292	8349	8407	8464	57
6	8522	8579	8637	8694	8752	8809	8866	8924	8981	9039	57
7	9096	9153	9211	9268	9325	9383	9440	9497	9555	9612	57
8	9669	9726	9784	9841	9898	9956	880013	880070	880127	880185	57
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2	1955	2012	2069	2126	2183	2240	2297	2354	2411	2468	57
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5	3661	3718	3775	3832	3888	3945	4002	4059	4115	4172	57
6	4229	4285	4342	4399	4455	4512	4569	4625	4682	4739	57
7	4795	4852	4909	4965	5022	5078	5135	5192	5248	5305	57
8	5361	5418	5474	5531	5587	5644	5700	5757	5813	5870	57
9	5926	5983	6039	6096	6152	6209	6265	6321	6378	6434	56
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2	7617	7674	7730	7786	7842	7898	7955	8011	8067	8123	56
3	8179	8236	8292	8348	8404	8460	8516	8573	8629	8685	56
4	8741	8797	8853	8909	8965	9021	9077	9134	9190	9246	56
5	9302	9358	9414	9470	9526	9582	9638	9694	9750	9806	56
6	9862	9918	9974	890030	890086	890141	890197	890253	890309	890365	56
7	890421	890477	890533	0589	0645	0700	0756	0812	0868	0924	56
8	0980	1035	1091	1147	1203	1259	1314	1370	1426	1482	56
9	1537	1593	1649	1705	1760	1816	1872	1928	1983	2039	56
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6	5423	5478	5533	5588	5644	5699	5754	5809	5864	5920	55
7	5975	6030	6085	6140	6195	6251	6306	6361	6416	6471	55
8	6526	6581	6636	6692	6747	6802	6857	6912	6967	7022	55
9	7077	7132	7187	7242	7297	7352	7407	7462	7517	7572	55
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2	8725	8780	8835	8890	8944	8999	9054	9109	9164	9218	55
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6	0913	0968	1022	1077	1131	1186	1240	1295	1349	1404	55
7	1458	1513	1567	1622	1676	1731	1785	1840	1894	1948	54
8	2003	2057	2112	2166	2221	2275	2329	2384	2438	2492	54
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2	4174	4229	4283	4337	4391	4445	4499	4553	4607	4661	54
3	4716	4770	4824	4878	4932	4986	5040	5094	5148	5202	54
4	5256	5310	5364	5418	5472	5526	5580	5634	5688	5742	54
5	5796	5850	5904	5958	6012	6066	6119	6173	6227	6281	54
6	6335	6389	6443	6497	6551	6604	6658	6712	6766	6820	54
7	6874	6927	6981	7035	7089	7143	7196	7250	7304	7358	54
8	7411	7465	7519	7573	7626	7680	7734	7787	7841	7895	54
9	7949	8002	8056	8110	8163	8217	8270	8324	8378	8431	54
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3	910091	910144	910197	910251	910304	910358	910411	910464	910518	0571	53
4	0624	0678	0731	0784	0838	0891	0944	0998	1051	1104	53
5	1158	1211	1264	1317	1371	1424	1477	1530	1584	1637	53
6	1690	1743	1797	1850	1903	1956	2009	2063	2116	2169	53
7	2222	2275	2328	2381	2435	2488	2541	2594	2647	2700	53
8	2753	2806	2859	2913	2966	3019	3072	3125	3178	3231	53
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2	4872	4925	4977	5030	5083	5136	5189	5241	5294	5347	53
3	5400	5453	5505	5558	5611	5664	5716	5769	5822	5875	53
4	5927	5980	6033	6085	6138	6191	6243	6296	6349	6401	53
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7	7506	7558	7611	7663	7716	7768	7820	7873	7925	7978	52
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9	8555	8607	8659	8712	8764	8816	8869	8921	8973	9026	52
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1	9601	9653	9706	9758	9810	9862	9914	9967	920019	920071	52
2	920123	920176	920228	920280	920332	920384	920436	920489	0541	0593	52
3	0645	0697	0749	0801	0853	0906	0958	1010	1062	1114	52
4	1166	1218	1270	1322	1374	1426	1478	1530	1582	1634	52
5	1686	1738	1790	1842	1894	1946	1998	2050	2102	2154	52
6	2206	2258	2310	2362	2414	2466	2518	2570	2622	2674	52
7	2725	2777	2829	2881	2933	2985	3037	3089	3140	3192	52
8	3244	3296	3348	3399	3451	3503	3555	3607	3658	3710	52
9	3762	3814	3865	3917	3969	4021	4072	4124	4176	4228	52
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3	5828	5879	5931	5982	6034	6085	6137	6188	6240	6291	51
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5	6857	6908	6959	7011	7062	7114	7165	7216	7268	7319	51
6	7370	7422	7473	7524	7576	7627	7678	7730	7781	7832	51
7	7883	7935	7986	8037	8088	8140	8191	8242	8293	8345	51
8	8396	8447	8498	8549	8601	8652	8703	8754	8805	8857	51
9	8908	8959	9010	9061	9112	9163	9215	9266	9317	9368	51
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1	9930	9981	930032	930083	930134	930185	930236	930287	930338	930389	51
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3	0949	1000	1051	1102	1153	1204	1254	1305	1356	1407	51
4	1458	1509	1560	1610	1661	1712	1763	1814	1865	1915	51
5	1966	2017	2068	2118	2169	2220	2271	2322	2372	2423	51
6	2474	2524	2575	2626	2677	2727	2778	2829	2879	2930	51
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9	3993	4044	4094	4145	4195	4246	4296	4347	4397	4448	51
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7	8019	8069	8119	8169	8219	8269	8320	8370	8420	8470	50
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8	3495	3544	3593	3643	3692	3742	3791	3841	3890	3939	49
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2	5469	5518	5567	5616	5665	5715	5764	5813	5862	5912	49
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4	6452	6501	6551	6600	6649	6698	6747	6796	6845	6894	49
5	6943	6992	7041	7090	7140	7189	7238	7287	7336	7385	49
6	7434	7483	7532	7581	7630	7679	7728	7777	7826	7875	49
7	7924	7973	8022	8070	8119	8168	8217	8266	8315	8364	49
8	8413	8462	8511	8560	8609	8657	8706	8755	8804	8853	49
9	8902	8951	8999	9048	9097	9146	9195	9244	9292	9341	49
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1	9878	9926	9975	950024	950073	950121	950170	950219	950267	950316	49
2	950365	950414	950462	0511	0560	0608	0657	0706	0754	0803	49
3	0851	0900	0949	0997	1046	1095	1143	1192	1240	1289	49
4	1338	1386	1435	1483	1532	1580	1629	1677	1726	1775	49
5	1823	1872	1920	1969	2017	2066	2114	2163	2211	2260	48
6	2308	2356	2405	2453	2502	2550	2599	2647	2696	2744	48
7	2792	2841	2889	2938	2986	3034	3083	3131	3180	3228	48
8	3276	3325	3373	3421	3470	3518	3566	3615	3663	3711	48
9	3760	3808	3856	3905	3953	4001	4049	4098	4146	4194	48
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4	6168	6216	6265	6313	6361	6409	6457	6505	6553	6601	48
5	6649	6697	6745	6793	6840	6888	6936	6984	7032	7080	48
6	7128	7176	7224	7272	7320	7368	7416	7464	7512	7559	48
7	7607	7655	7703	7751	7799	7847	7894	7942	7990	8038	48
8	8086	8134	8181	8229	8277	8325	8373	8421	8468	8516	48
9	8564	8612	8659	8707	8755	8803	8850	8898	8946	8994	48
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1	9518	9566	9614	9661	9709	9757	9804	9852	9900	9947	48
2	9995	960042	960090	960138	960185	960233	960281	960328	960376	960423	48
3	960471	0518	0566	0613	0661	0709	0756	0804	0851	0899	48
4	0946	0994	1041	1089	1136	1184	1231	1279	1326	1374	47
5	1421	1469	1516	1563	1611	1658	1706	1753	1801	1848	47
6	1895	1943	1990	2038	2085	2132	2180	2227	2275	2322	47
7	2369	2417	2464	2511	2559	2606	2653	2701	2748	2795	47
8	2843	2890	2937	2985	3032	3079	3126	3174	3221	3268	47
9	3316	3363	3410	3457	3504	3552	3599	3646	3693	3741	47
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2	4731	4778	4825	4872	4919	5966	5013	5061	5108	5155	47
3	5202	5249	5296	5343	5390	5437	5484	5531	5578	5625	47
4	5672	5719	5766	5813	5860	5907	5954	6001	6048	6095	47
5	6142	6189	6236	6283	6329	6376	6423	6470	6517	6564	47
6	6611	6658	6705	6752	6799	6845	6892	6939	6986	7033	47
7	7080	7127	7173	7220	7267	7314	7361	7408	7454	7501	47
8	7548	7595	7642	7688	7735	7782	7829	7875	7922	7969	47
9	8016	8062	8109	8156	8203	8249	8296	8343	8390	8436	47
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4	970347	970393	970440	0486	0533	0579	0626	0672	0719	0765	46
5	0812	0858	0904	0951	0997	1044	1090	1137	1183	1229	46
6	1276	1322	1369	1415	1461	1508	1554	1601	1647	1693	46
7	1740	1786	1832	1879	1925	1971	2018	2064	2110	2157	46
8	2203	2249	2295	2342	2388	2434	2481	2527	2573	2619	46
9	2666	2712	2758	2804	2851	2897	2943	2989	3035	3082	46
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1	3590	3636	3682	3728	3774	3820	3866	3913	3959	4005	46
2	4051	4097	4143	4189	4235	4281	4327	4374	4420	4466	46
3	4512	4558	4604	4650	4696	4742	4788	4834	4880	4926	46
4	4972	5018	5064	5110	5156	5202	5248	5294	5340	5386	46
5	5432	5478	5524	5570	5616	5662	5707	5753	5799	5845	46
6	5891	5937	5983	6029	6075	6121	6167	6212	6258	6304	46
7	6350	6396	6442	6488	6533	6579	6625	6671	6717	6763	46
8	6808	6854	6900	6946	6992	7037	7083	7129	7175	7220	46
9	7266	7312	7358	7403	7449	7495	7541	7586	7632	7678	46
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1	8181	8226	8272	8317	8363	8409	8454	8500	8546	8591	46
2	8637	8683	8728	8774	8819	8865	8911	8956	9002	9047	46
3	9093	9138	9184	9230	9275	9321	9366	9412	9457	9503	46
4	9548	9594	9639	9685	9730	9776	9821	9867	9912	9958	46
5	980003	980049	980094	980140	980185	980231	980276	980322	980367	980412	45
6	0458	0503	0549	0594	0640	0685	0730	0776	0821	0867	45
7	0912	0957	1003	1048	1093	1139	1184	1229	1275	1320	45
8	1366	1411	1456	1501	1547	1592	1637	1683	1728	1773	45
9	1819	1864	1909	1954	2000	2045	2090	2135	2181	2226	45
960	982271	982316	982362	982407	982452	982497	982543	982588	982633	982678	45
1	2723	2769	2814	2859	2904	2949	2994	3040	3085	3130	45
2	3175	3220	3265	3310	3356	3401	3446	3491	3536	3581	45
3	3626	3671	3716	3762	3807	3852	3897	3942	3987	4032	45
4	4077	4122	4167	4212	4257	4302	4347	4392	4437	4482	45
5	4527	4572	4617	4662	4707	4752	4797	4842	4887	4932	45
6	4977	5022	5067	5112	5157	5202	5247	5292	5337	5382	45
7	5426	5471	5516	5561	5606	5651	5696	5741	5786	5830	45
8	5875	5920	5965	6010	6055	6100	6144	6189	6234	6279	45
9	6324	6369	6413	6458	6503	6548	6593	6637	6682	6727	45
970	986772	986817	986861	986906	986951	986996	987040	987085	987130	987175	45
1	7219	7264	7309	7353	7398	7443	7488	7532	7577	7622	45
2	7666	7711	7756	7800	7845	7890	7934	7979	8024	8068	45
3	8113	8157	8202	8247	8291	8336	8381	8425	8470	8514	45
4	8559	8604	8648	8693	8737	8782	8826	8871	8916	8960	45
5	9005	9049	9094	9138	9183	9227	9272	9316	9361	9405	45
6	9450	9494	9539	9583	9628	9672	9717	9761	9806	9850	44
7	9895	9939	9983	990028	990072	990117	990161	990206	990250	990294	44
8	990339	990383	990428	0472	0516	0561	0605	0650	0694	0738	44
9	0783	0827	0871	0916	0960	1004	1049	1093	1137	1182	44
980	991226	991270	991315	991359	991403	991448	991492	991536	991580	991625	44
1	1669	1713	1758	1802	1846	1890	1935	1979	2023	2067	44
2	2111	2156	2200	2244	2288	2333	2377	2421	2465	2509	44
3	2554	2598	2642	2686	2730	2774	2819	2863	2907	2951	44
4	2995	3039	3083	3127	3172	3216	3260	3304	3348	3392	44
5	3436	3480	3524	3568	3613	3657	3701	3745	3789	3833	44
6	3877	3921	3965	4009	4053	4097	4141	4185	4229	4273	44
7	4317	4361	4405	4449	4493	4537	4581	4625	4669	4713	44
8	4757	4801	4845	4889	4933	4977	5021	5065	5108	5152	44
9	5196	5240	5284	5328	5372	5416	5460	5504	5547	5591	44
990	995635	995679	995723	995767	995811	995854	995898	995942	995986	996030	44
1	6074	6117	6161	6205	6249	6293	6337	6380	6424	6468	44
2	6512	6555	6599	6643	6687	6731	6774	6818	6862	6906	44
3	6949	6993	7037	7080	7124	7168	7212	7255	7299	7343	44
4	7386	7430	7474	7517	7561	7605	7648	7692	7736	7779	44
5	7823	7867	7910	7954	7998	8041	8085	8129	8172	8216	44
6	8259	8303	8347	8390	8434	8477	8521	8564	8608	8652	44
7	8695	8739	8782	8826	8869	8913	8956	9000	9043	9087	44
8	9131	9174	9218	9261	9305	9348	9392	9435	9479	9522	44
9	9565	9609	9652	9696	9739	9783	9826	9870	9913	9957	43
N.	0	1	2	3	4	5	6	7	8	9	D.

TABLE III.

LOGARITHMS OF ALL THE SINES, COSINES, TANGENTS, COTANGENTS, AND SECANTS, FROM 0° TO 90°.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	0.000000		Infinite.	0.000000		Infinite.	10.000000		10.000000	60
1	6.463726	501717	13.536274	6.463726	501717	13.536274	000000	00	000000	59
2	764756	293485	235244	764756	293485	235244	000000	00	000000	58
3	940847	208231	059153	940847	208231	059153	000000	00	000000	57
4	7.065786	161517	12.934214	7.065786	161517	12.934214	000000	00	000000	56
5	162696	131968	837304	162696	131969	837304	000000	00	000000	55
6	241877	111578	758123	241878	111578	758122	000001	00	9.999999	54
7	308824	96653	691176	308825	96653	691175	000001	00	999999	53
8	366816	85254	633184	366817	85254	633183	000001	00	999999	52
9	417968	76262	582032	417970	76263	582030	000001	01	999999	51
10	463725	68988	536275	463727	68988	536273	000002	01	999998	50
11	7.505118	62981	12.494882	7.505120	62981	12.494880	10.000002	01	9.999998	49
12	542906	57936	457094	542909	57937	457091	000003	01	999997	48
13	577668	53641	422332	577672	53642	422328	000003	01	999997	47
14	609853	49938	390147	609857	49939	390143	000004	01	999996	46
15	639816	46714	360184	639820	46715	360180	000004	01	999996	45
16	667844	43881	332156	667849	43882	332151	000005	01	999995	44
17	694173	41372	305827	694179	41373	305821	000005	01	999995	43
18	718997	39135	281003	719003	39136	280997	000006	01	999994	42
19	742477	37127	257523	742484	37128	257516	000007	01	999993	41
20	764754	35315	235246	764761	35316	235239	000007	01	999993	40
21	7.785943	33672	12.214057	7.785951	33673	12.214049	10.000008	01	9.999992	39
22	806146	32175	193854	806155	32176	193845	000009	01	999991	38
23	825451	30805	174549	825460	30807	174540	000010	01	999990	37
24	843934	29547	156066	843944	29549	156056	000011	02	999989	36
25	861662	28388	138338	861674	28390	138326	000011	02	999988	35
26	878695	27317	121305	878708	27319	121292	000012	02	999988	34
27	895085	26323	104915	895099	26325	104901	000013	02	999987	33
28	910879	25399	089121	910894	25401	089106	000014	02	999986	32
29	926119	24538	073881	926134	24540	073866	000015	02	999985	31
30	940842	23733	059158	940858	23735	059142	000017	02	999983	30
31	7.955082	22980	12.044918	7.955100	22982	12.044900	10.000018	02	9.999982	29
32	968870	22273	031130	968889	22275	031111	000019	02	999981	28
33	982233	21608	017767	982253	21610	017747	000020	02	999980	27
34	995198	20981	004802	995219	20983	004781	000021	02	999979	26
35	8.007787	20390	11.992213	8.007809	20392	11.992191	000023	02	999977	25
36	020021	19831	979979	020045	19833	979955	000024	02	999976	24
37	031919	19302	968081	031945	19305	968055	000025	02	999975	23
38	043501	18801	956499	043527	18803	956473	000027	02	999973	22
39	054781	18325	945219	054809	18327	945191	000028	02	999972	21
40	065776	17872	934224	065806	17875	934194	000029	02	999971	20
41	8.076500	17441	11.923500	8.076531	17444	11.923469	10.000031	02	9.999969	19
42	086965	17031	913035	086997	17034	913003	000032	03	999968	18
43	097183	16639	902817	097217	16642	902783	000034	03	999966	17
44	107167	16265	892833	107203	16268	892797	000036	03	999964	16
45	116926	15908	883074	116963	15911	883037	000037	03	999963	15
46	126471	15566	873529	126510	15569	873490	000039	03	999961	14
47	135810	15238	864190	135851	15241	864149	000041	03	999959	13
48	144953	14924	855047	144996	14927	855004	000042	03	999958	12
49	153907	14622	846093	153952	14625	846048	000044	03	999956	11
50	162681	14333	837319	162727	14336	837273	000046	03	999954	10
51	8.171280	14054	11.828720	8.171328	14057	11.828672	10.000048	03	9.999952	9
52	179713	13787	820287	179763	13790	820237	000050	03	999950	8
53	187985	13529	812015	188036	13532	811964	000052	03	999948	7
54	196102	13281	803898	196156	13284	803844	000054	03	999946	6
55	204070	13041	795930	204126	13044	795874	000056	03	999944	5
56	211895	12810	788105	211953	12814	788047	000058	04	999942	4
57	219581	12587	780419	219641	12591	780359	000060	04	999940	3
58	227134	12372	772866	227195	12376	772805	000062	04	999938	2
59	234557	12164	765443	234621	12168	765379	000064	04	999936	1
60	241855	11963	758145	241921	11967	758079	000066	04	999934	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	8.241855	11963	11.758145	8.241921	11967	11.758079	10.000066	04	9.999934	60
1	249033	11768	750967	249102	11772	750898	000068	04	999932	59
2	256094	11580	743906	256165	11584	743835	000071	04	999929	58
3	263042	11398	736958	263115	11402	736885	000073	04	999927	57
4	269881	11221	730119	269956	11225	730044	000075	04	999925	56
5	276614	11050	723386	276691	11054	723309	000078	04	999922	55
6	283243	10883	716757	283323	10887	716677	000080	04	999920	54
7	289773	10722	710227	289856	10726	710144	000082	04	999918	53
8	296207	10566	703793	296292	10570	703708	000085	04	999915	52
9	302546	10414	697454	302634	10418	697366	000087	04	999913	51
10	308794	10266	691206	308884	10270	691116	000090	04	999910	50
11	8.314954	10122	11.685046	8.315046	10126	11.684954	10.000093	04	9.999907	49
12	321027	9982	678973	321122	9987	678878	000095	04	999905	48
13	327016	9847	672984	327114	9851	672886	000098	04	999902	47
14	332924	9714	667076	333025	9719	666975	000101	05	999899	46
15	338753	9586	661247	338856	9590	661144	000103	05	999897	45
16	344504	9460	655496	344610	9465	655390	000106	05	999894	44
17	350181	9338	649819	350289	9343	649711	000109	05	999891	43
18	355783	9219	644217	355395	9224	644105	000112	05	999888	42
19	361315	9103	638685	361430	9108	638570	000115	05	999885	41
20	366777	8990	633223	366895	8995	633105	000118	05	999882	40
21	8.372171	8880	11.627829	8.372292	8885	11.627708	10.000121	05	9.999879	39
22	377499	8772	622501	377622	8777	622378	000124	05	999876	38
23	382762	8667	617238	382889	8672	617111	000127	05	999873	37
24	387962	8564	612038	388092	8570	611908	000130	05	999870	36
25	393101	8464	606899	393234	8469	606766	000133	05	999867	35
26	398179	8366	601821	398315	8371	601685	000136	05	999864	34
27	403199	8271	596801	403338	8276	596662	000139	05	999861	33
28	408161	8177	591839	408304	8182	591696	000142	05	999858	32
29	413068	8086	586932	413213	8091	586787	000146	05	999854	31
30	417919	7996	582081	418068	8002	581932	000149	06	999851	30
31	8.422717	7909	11.577283	8.422869	7914	11.577131	10.000152	06	9.999848	29
32	427462	7823	572538	427618	7829	572382	000156	06	999844	28
33	432156	7740	567844	432315	7745	567685	000159	06	999841	27
34	436800	7657	563200	436962	7663	563038	000162	06	999838	26
35	441394	7577	558606	441560	7583	558440	000166	06	999834	25
36	445941	7499	554059	446110	7505	553890	000169	06	999831	24
37	450440	7422	549560	450613	7428	549387	000173	06	999827	23
38	454893	7346	545107	455070	7352	544930	000177	06	999823	22
39	459301	7273	540699	459481	7279	540519	000180	06	999820	21
40	463665	7200	536335	463849	7206	536151	000184	06	999816	20
41	8.467985	7129	11.532015	8.468172	7135	11.531828	10.000188	06	9.999812	19
42	472263	7060	527737	472454	7066	527546	000191	06	999809	18
43	476498	6991	523502	476693	6998	523307	000195	06	999805	17
44	480693	6924	519307	480892	6931	519108	000199	06	999801	16
45	484848	6859	515152	485050	6865	514950	000203	07	999797	15
46	488963	6794	511037	489170	6801	510830	000207	07	999793	14
47	493040	6731	506960	493250	6738	506750	000210	07	999790	13
48	497078	6669	502922	497293	6676	502707	000214	07	999786	12
49	501080	6608	498920	501298	6615	498702	000218	07	999782	11
50	505045	6548	494955	505267	6555	494733	000222	07	999778	10
51	8.508974	6489	11.491026	8.509200	6496	11.490800	10.000226	07	9.999774	9
52	512867	6432	487133	513098	6439	486902	000231	07	999769	8
53	516726	6375	483274	516961	6382	483039	000235	07	999765	7
54	520551	6319	479449	520790	6326	479210	000239	07	999761	6
55	524343	6264	475657	524586	6272	475414	000243	07	999757	5
56	528102	6211	471898	528349	6218	471651	000247	07	999753	4
57	531828	6158	468172	532080	6165	467920	000252	07	999748	3
58	535523	6106	464477	535779	6113	464221	000256	07	999744	2
59	539186	6055	460814	539447	6062	460553	000260	07	999740	1
60	542819	6004	457181	543084	6012	456916	000265	07	999735	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	8.542819	6004	11.457181	8.543084	6012	11.456916	10.000265	07	9.999735	60
1	546422	5955	453578	546691	5962	453309	000269	07	999731	59
2	549995	5906	450005	550268	5914	449732	000274	07	999726	58
3	553539	5858	446461	553817	5866	446183	000278	08	999722	57
4	557054	5811	442946	557336	5819	442664	000283	08	999717	56
5	560540	5765	439460	560828	5773	439172	000287	08	999713	55
6	563999	5719	436001	564291	5727	435709	000292	08	999708	54
7	567431	5674	432569	567727	5682	432273	000296	08	999704	53
8	570836	5630	429164	571137	5638	428863	000301	08	999699	52
9	574214	5587	425786	574520	5595	425480	000306	08	999694	51
10	577566	5544	422434	577877	5552	422123	000311	08	999689	50
11	8.580892	5502	11.419108	8.581208	5510	11.418792	10.000315	08	9.999685	49
12	584193	5460	415807	584514	5468	415486	000320	08	999680	48
13	587469	5419	412531	587795	5427	412205	000325	08	999675	47
14	590721	5379	409279	591051	5387	408949	000330	08	999670	46
15	593948	5339	406052	594283	5347	405717	000335	08	999665	45
16	597152	5300	402848	597492	5308	402508	000340	08	999660	44
17	600332	5261	399668	600677	5270	399323	000345	08	999655	43
18	603489	5223	396511	603839	5232	396161	000350	08	999650	42
19	606623	5186	393377	606978	5194	393022	000355	09	999645	41
20	609734	5149	390266	610094	5158	389906	000360	09	999640	40
21	8.612823	5112	11.387177	8.613189	5121	11.386811	10.000365	09	9.999635	39
22	615891	5076	384109	616262	5085	383738	000371	09	999629	38
23	618937	5041	381063	619313	5050	380687	000376	09	999624	37
24	621962	5006	378038	622343	5015	377657	000381	09	999619	36
25	624965	4972	375035	625352	4981	374648	000386	09	999614	35
26	627948	4938	372052	628340	4947	371660	000392	09	999608	34
27	630911	4904	369089	631308	4913	368692	000397	09	999603	33
28	633854	4871	366146	634256	4880	365774	000403	09	999597	32
29	636776	4839	363224	637184	4848	362816	000408	09	999592	31
30	639680	4806	360320	640093	4816	359907	000414	09	999586	30
31	8.642563	4775	11.357437	8.642982	4784	11.357018	10.000419	09	9.999581	29
32	645428	4743	354572	645853	4753	354147	000425	09	999575	28
33	648274	4712	351726	648704	4722	351296	000430	09	999570	27
34	651102	4682	348898	651537	4691	348463	000436	09	999564	26
35	653911	4652	346089	654352	4661	345648	000442	10	999558	25
36	656702	4622	343298	657149	4631	342851	000447	10	999553	24
37	659475	4592	340525	659928	4602	340072	000453	10	999547	23
38	662230	4563	337770	662689	4573	337311	000459	10	999541	22
39	664968	4535	335032	665433	4544	334567	000465	10	999535	21
40	667689	4506	332311	668160	4516	331840	000471	10	999529	20
41	8.670393	4479	11.329607	8.670870	4488	11.329130	10.000476	10	9.999524	19
42	673080	4451	326920	673563	4461	326437	000482	10	999518	18
43	675751	4424	324249	676239	4434	323761	000488	10	999512	17
44	678405	4397	321595	678900	4407	321100	000494	10	999506	16
45	681043	4370	318957	681544	4380	318456	000500	10	999500	15
46	683665	4344	316335	684172	4354	315828	000507	10	999493	14
47	686272	4318	313728	686784	4328	313216	000513	10	999487	13
48	688863	4292	311137	689381	4303	310619	000519	10	999481	12
49	691438	4267	308562	691963	4277	308037	000525	10	999475	11
50	693998	4242	306002	694529	4252	305471	000531	10	999469	10
51	8.696543	4217	11.303457	8.697081	4228	11.302919	10.000537	11	9.999463	9
52	699073	4192	300927	699617	4203	300383	000544	11	999456	8
53	701589	4168	298411	702139	4179	297861	000550	11	999450	7
54	704090	4144	295910	704646	4155	295354	000557	11	999443	6
55	706577	4121	293423	707140	4132	292860	000563	11	999437	5
56	709049	4097	290951	709618	4108	290382	000569	11	999431	4
57	711507	4074	288493	712083	4085	287917	000576	11	999424	3
58	713952	4051	286048	714534	4062	285466	000582	11	999418	2
59	716383	4029	283617	716972	4040	283028	000589	11	999411	1
60	718800	4006	281200	719396	4017	280604	000596	11	999404	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	8.718800	4006	11.281200	8.719396	4017	11.280604	10.000596	11	9.999404	60
1	721204	3984	278796	721806	3995	278194	000602	11	999398	59
2	723595	3963	276405	724204	3974	275796	000609	11	999391	58
3	725972	3941	274028	726588	3952	273412	000616	11	999384	57
4	728337	3919	271663	728959	3931	271041	000622	11	999378	56
5	730688	3898	269312	731317	3909	268683	000629	11	999371	55
6	733027	3877	266973	733663	3889	266337	000636	12	999364	54
7	735354	3857	264646	735996	3868	264004	000643	12	999357	53
8	737667	3836	262333	738317	3848	261683	000650	12	999350	52
9	739969	3816	260031	740626	3827	259374	000657	12	999343	51
10	742259	3796	257741	742922	3807	257078	000664	12	999336	50
11	8.744536	3776	11.255464	8.745207	3788	11.254793	10.000671	12	9.999329	49
12	746802	3756	253198	747479	3768	252521	000678	12	999322	48
13	749055	3737	250945	749740	3749	250260	000685	12	999315	47
14	751297	3717	248703	751989	3729	248011	000692	12	999308	46
15	753528	3698	246472	754227	3710	245773	000699	12	999301	45
16	755747	3680	244253	756453	3692	243547	000706	12	999294	44
17	757955	3661	242045	758668	3673	241332	000714	12	999286	43
18	760151	3642	239849	760872	3655	239128	000721	12	999279	42
19	762337	3624	237663	763065	3636	236935	000728	12	999272	41
20	764511	3606	235489	765246	3618	234754	000735	12	999265	40
21	8.766675	3588	11.233325	8.767417	3600	11.232583	10.000743	12	9.999257	39
22	768828	3570	231172	769578	3583	230422	000750	13	999250	38
23	770970	3553	229030	771727	3565	228273	000758	13	999242	37
24	773101	3535	226899	773866	3548	226134	000765	13	999235	36
25	775223	3518	224777	775995	3531	224005	000773	13	999227	35
26	777333	3501	222667	778114	3514	221886	000780	13	999220	34
27	779434	3484	220566	780222	3497	219778	000788	13	999212	33
28	781524	3467	218476	782320	3480	217680	000795	13	999205	32
29	783605	3451	216395	784408	3464	215592	000803	13	999197	31
30	785675	3434	214325	786486	3447	213514	000811	13	999189	30
31	8.787736	3418	11.212264	8.788554	3431	11.211446	10.000819	13	9.999181	29
32	789787	3402	210213	790613	3415	209387	000826	13	999174	28
33	791828	3386	208172	792662	3399	207338	000834	13	999166	27
34	793859	3370	206141	794701	3383	205299	000842	13	999158	26
35	795881	3355	204119	796731	3368	203269	000850	13	999150	25
36	797894	3339	202106	798752	3352	201248	000858	13	999142	24
37	799897	3324	200103	800763	3337	199237	000866	13	999134	23
38	801892	3308	198108	802765	3322	197235	000874	13	999126	22
39	803876	3293	196124	804758	3307	195242	000882	13	999118	21
40	805852	3278	194148	806742	3292	193258	000890	14	999110	20
41	8.807819	3263	11.192181	8.808717	3277	11.191283	10.000898	14	9.999102	19
42	809777	3249	190223	810683	3262	189317	000906	14	999094	18
43	811726	3234	188274	812641	3248	187359	000914	14	999086	17
44	813667	3219	186333	814589	3233	185411	000923	14	999077	16
45	815599	3205	184401	816529	3219	183471	000931	14	999069	15
46	817522	3191	182478	818461	3205	181539	000939	14	999061	14
47	819436	3177	180564	820384	3191	179616	000947	14	999053	13
48	821343	3163	178657	822298	3177	177702	000956	14	999044	12
49	823240	3149	176760	824205	3163	175795	000964	14	999036	11
50	825130	3136	174870	826103	3150	173897	000973	14	999027	10
51	8.827011	3122	11.172989	8.827992	3136	11.172008	10.000981	14	9.999019	9
52	828884	3108	171116	829874	3123	170126	000990	14	999010	8
53	830749	3095	169251	831748	3109	168252	000998	14	999002	7
54	832607	3082	167393	833613	3096	166387	001007	14	998993	6
55	834456	3069	165544	835471	3083	164529	001016	14	998984	5
56	836297	3056	163703	837321	3070	162679	001024	14	998976	4
57	838130	3043	161870	839163	3057	160837	001033	15	998967	3
58	839956	3030	160044	840998	3045	159002	001042	15	998958	2
59	841774	3017	158226	842825	3032	157175	001050	15	998950	1
60	843585	3005	156415	844644	3019	155356	001059	15	998941	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	8.843585	3005	11.156415	8.844644	3020	11.155356	10.001059	15	9.998941	60
1	845387	2992	154613	846455	3007	153545	001068	15	998932	59
2	847183	2980	152817	848260	2995	151740	001077	15	998923	58
3	848971	2967	151029	850057	2982	149943	001086	15	998914	57
4	850751	2955	149249	851846	2970	148154	001095	15	998905	56
5	852525	2943	147475	853628	2958	146372	001104	15	998896	55
6	854291	2931	145709	855403	2946	144597	001113	15	998887	54
7	856049	2919	143951	857171	2935	142829	001122	15	998878	53
8	857801	2908	142199	858932	2923	141068	001131	15	998869	52
9	859546	2896	140454	860686	2911	139314	001140	15	998860	51
10	861283	2884	138717	862433	2900	137567	001149	15	998851	50
11	8.863014	2873	11.136986	8.864173	2888	11.135827	10.001159	15	9.998841	49
12	864738	2861	135262	865906	2877	134094	001168	16	998832	48
13	866455	2850	133545	867632	2866	132368	001177	16	998823	47
14	868165	2839	131835	869351	2855	130649	001187	16	998813	46
15	869868	2828	130132	871064	2844	128936	001196	16	998804	45
16	871565	2817	128435	872770	2833	127230	001205	16	998795	44
17	873255	2806	126745	874469	2822	125531	001215	16	998785	43
18	874938	2795	125062	876162	2811	123838	001224	16	998776	42
19	876615	2784	123385	877849	2800	122151	001234	16	998766	41
20	878285	2773	121715	879529	2789	120471	001243	16	998757	40
21	8.879949	2763	11.120051	8.881202	2779	11.118798	10.001253	16	9.998747	39
22	881607	2752	118393	882869	2768	117131	001262	16	998738	38
23	883258	2742	116742	884530	2758	115470	001272	16	998728	37
24	884903	2731	115097	886185	2747	113815	001282	16	998718	36
25	886542	2721	113458	887833	2737	112167	001292	16	998708	35
26	888174	2711	111826	889476	2727	110524	001301	16	998699	34
27	889801	2700	110199	891112	2717	108888	001311	16	998689	33
28	891421	2690	108579	892742	2707	107258	001321	17	998679	32
29	893035	2680	106965	894366	2697	105634	001331	17	998669	31
30	894643	2670	105357	895984	2687	104016	001341	17	998659	30
31	8.896246	2660	11.103754	8.897596	2677	11.102404	10.001351	17	9.998649	29
32	897842	2651	102158	899203	2667	100797	001361	17	998639	28
33	899432	2641	100568	900803	2658	099197	001371	17	998629	27
34	901017	2631	098983	902398	2648	097602	001381	17	998619	26
35	902596	2622	097404	903987	2639	096013	001391	17	998609	25
36	904169	2612	095831	905570	2629	094430	001401	17	998599	24
37	905736	2603	094264	907147	2620	092853	001411	17	998589	23
38	907297	2593	092703	908719	2610	091281	001422	17	998578	22
39	908853	2584	091147	910285	2601	089715	001432	17	998568	21
40	910404	2575	089596	911846	2592	088154	001442	17	998558	20
41	8.911949	2566	11.088051	8.913401	2583	11.086599	10.001452	17	9.998548	19
42	913488	2556	086512	914951	2574	085049	001463	17	998537	18
43	915022	2547	084978	916495	2565	083505	001473	17	998527	17
44	916550	2538	083450	918034	2556	081966	001484	18	998516	16
45	918073	2529	081927	919568	2547	080432	001494	18	998506	15
46	919591	2520	080409	921096	2538	078904	001505	18	998495	14
47	921103	2512	078897	922619	2530	077381	001515	18	998485	13
48	922610	2503	077390	924136	2521	075864	001526	18	998474	12
49	924112	2494	075888	925649	2512	074351	001536	18	998464	11
50	925609	2486	074391	927156	2504	072844	001547	18	998453	10
51	8.927100	2477	11.072900	8.928658	2495	11.071342	10.001558	18	9.998442	9
52	928587	2469	071413	930155	2486	069845	001569	18	998431	8
53	930068	2460	069932	931647	2478	068353	001579	18	998421	7
54	931544	2452	068456	933134	2470	066866	001590	18	998410	6
55	933015	2443	066985	934616	2461	065384	001601	18	998399	5
56	934481	2435	065519	936093	2453	063907	001612	18	998388	4
57	935942	2427	064058	937565	2445	062435	001623	18	998377	3
58	937398	2419	062602	939032	2437	060968	001634	18	998366	2
59	938850	2411	061150	940494	2429	059506	001645	18	998355	1
60	940296	2403	059704	941952	2421	058048	001656	18	998344	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	8.940296	2403	11.059704	8.941952	2421	11.058048	10.001656	18	9.998344	60
1	941738	2394	058262	943404	2413	056596	001667	19	998333	59
2	943174	2387	056826	944852	2405	055148	001678	19	998322	58
3	944606	2379	055394	946295	2397	053705	001689	19	998311	57
4	946034	2371	053966	947734	2390	052266	001700	19	998300	56
5	947456	2363	052544	949168	2382	050832	001711	19	998289	55
6	948874	2355	051126	950597	2374	049403	001723	19	998277	54
7	950287	2348	049713	952021	2367	047979	001734	19	998266	53
8	951696	2340	048304	953441	2359	046559	001745	19	998255	52
9	953100	2332	046900	954856	2351	045144	001757	19	998243	51
10	954499	2325	045501	956267	2344	043733	001768	19	998232	50
11	8.955894	2317	11.044106	8.957674	2336	11.042326	10.001780	19	9.998220	49
12	957284	2310	042716	959075	2329	040925	001791	19	998209	48
13	958670	2302	041330	960473	2322	039527	001803	19	998197	47
14	960052	2295	039948	961866	2314	038134	001814	19	998186	46
15	961429	2288	038571	963255	2307	036745	001826	19	998174	45
16	962801	2280	037199	964639	2300	035361	001837	19	998163	44
17	964170	2273	035830	966019	2293	033981	001849	20	998151	43
18	965534	2266	034466	967394	2286	032606	001861	20	998139	42
19	966893	2259	033107	968766	2279	031234	001872	20	998128	41
20	968249	2252	031751	970133	2272	029867	001884	20	998116	40
21	8.969600	2245	11.030400	8.971496	2265	11.028504	10.001896	20	9.998104	39
22	970947	2238	029053	972855	2258	027145	001908	20	998092	38
23	972289	2231	027711	974209	2251	025791	001920	20	998080	37
24	973628	2224	026372	975560	2244	024440	001932	20	998068	36
25	974962	2217	025038	976906	2237	023094	001944	20	998056	35
26	976293	2210	023707	978248	2230	021752	001956	20	998044	34
27	977619	2203	022381	979586	2223	020414	001968	20	998032	33
28	978941	2197	021059	980921	2217	019079	001980	20	998020	32
29	980259	2190	019741	982251	2210	017749	001992	20	998008	31
30	981573	2183	018427	983577	2204	016423	002004	20	997996	30
31	8.982883	2177	11.017117	8.984899	2197	11.015101	10.002016	20	9.997984	29
32	984189	2170	015811	986217	2191	013783	002028	20	997972	28
33	985491	2163	014509	987532	2184	012468	002041	21	997959	27
34	986789	2157	013211	988842	2178	011158	002053	21	997947	26
35	988083	2150	011917	990149	2171	009851	002065	21	997935	25
36	989374	2144	010626	991451	2165	008549	002078	21	997922	24
37	990660	2138	009340	992750	2159	007250	002090	21	997910	23
38	991943	2131	008057	994045	2152	005955	002103	21	997897	22
39	993222	2125	006778	995337	2146	004663	002115	21	997885	21
40	994497	2119	005503	996624	2140	003376	002127	21	997873	20
41	8.995768	2112	11.004232	8.997908	2134	11.002092	10.002140	21	9.997860	19
42	997036	2106	002964	999188	2127	000812	002153	21	997847	18
43	998299	2100	001701	9.000465	2121	10.999535	002165	21	997835	17
44	999560	2094	000440	001738	2115	998262	002178	21	997822	16
45	9.000816	2088	10.999184	003007	2109	996993	002191	21	997809	15
46	002069	2082	997931	004272	2103	995728	002203	21	997797	14
47	003318	2076	996682	005534	2097	994466	002216	21	997784	13
48	004563	2070	995437	006792	2091	993208	002229	21	997771	12
49	005805	2064	994195	008047	2085	991953	002242	21	997758	11
50	007044	2058	992956	009298	2080	990702	002255	22	997745	10
51	9.008278	2052	10.991722	9.010546	2074	10.989454	10.002268	22	9.997732	9
52	009510	2046	990490	011790	2068	988210	002281	22	997719	8
53	010737	2040	989263	013031	2062	986969	002294	22	997706	7
54	011962	2034	988038	014268	2056	985732	002307	22	997693	6
55	013182	2029	986818	015502	2051	984498	002320	22	997680	5
56	014400	2023	985600	016732	2045	983268	002333	22	997667	4
57	015613	2017	984387	017959	2039	982041	002346	22	997654	3
58	016824	2012	983176	019183	2034	980817	002359	22	997641	2
59	018031	2006	981969	020403	2028	979597	002372	22	997628	1
60	019235	2000	980765	021620	2023	978380	002386	22	997614	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
)	9.019235	2000	10.980765	9.021620	2023	10.978380	10.002386	22	9.997614	60
1	020435	1995	979565	022834	2017	977166	002399	22	997601	59
2	021632	1989	978368	024044	2011	975956	002412	22	997588	58
3	022825	1984	977175	025251	2006	974749	002426	22	997574	57
4	024016	1978	975984	026455	2001	973545	002439	22	997561	56
5	025203	1973	974797	027655	1995	972345	002453	22	997547	55
6	026386	1967	973614	028852	1990	971148	002466	23	997534	54
7	027567	1962	972433	030046	1985	969954	002480	23	997520	53
8	028744	1957	971256	031237	1979	968763	002493	23	997507	52
9	029918	1951	970082	032425	1974	967575	002507	23	997493	51
10	031089	1946	968911	033609	1969	966391	002520	23	997480	50
11	9.032257	1941	10.967743	9.034791	1964	10.965209	10.002534	23	9.997466	49
12	033421	1935	966579	035969	1958	964031	002548	23	997452	48
13	034582	1930	965418	037144	1953	962856	002561	23	997439	47
14	035741	1925	964259	038316	1948	961684	002575	23	997425	46
15	036896	1920	963104	039485	1943	960515	002589	23	997411	45
16	038048	1915	961952	040651	1938	959349	002603	23	997397	44
17	039197	1910	960803	041813	1933	958187	002617	23	997383	43
18	040342	1905	959658	042973	1928	957027	002631	23	997369	42
19	041485	1899	958515	044130	1923	955870	002645	23	997355	41
20	042625	1895	957375	045284	1918	954716	002659	23	997341	40
21	9.043762	1889	10.956238	9.046434	1913	10.953566	10.002673	24	9.997327	39
22	044895	1884	955105	047582	1908	952418	002687	24	997313	38
23	046026	1879	953974	048727	1903	951273	002701	24	997299	37
24	047154	1875	952846	049869	1898	950131	002715	24	997285	36
25	048279	1870	951721	051008	1894	948992	002729	24	997271	35
26	049400	1865	950600	052144	1889	947856	002743	24	997257	34
27	050519	1860	949481	053277	1884	946723	002758	24	997242	33
28	051635	1855	948365	054407	1879	945593	002772	24	997228	32
29	052749	1850	947251	055535	1874	944465	002786	24	997214	31
30	053859	1846	946141	056659	1870	943341	002801	24	997199	30
31	9.054966	1841	10.945034	9.057781	1865	10.942219	10.002815	24	9.997185	29
32	056071	1836	943929	058900	1860	941100	002830	24	997170	28
33	057172	1831	942828	060016	1855	939984	002844	24	997156	27
34	058271	1827	941729	061130	1851	938870	002859	24	997141	26
35	059367	1822	940633	062240	1846	937760	002873	24	997127	25
36	060460	1818	939540	063348	1842	936652	002888	24	997112	24
37	061551	1813	938449	064453	1837	935547	002902	24	997098	23
38	062639	1808	937361	065556	1833	934444	002917	25	997083	22
39	063724	1804	936276	066655	1828	933345	002932	25	997068	21
40	064806	1799	935194	067752	1824	932248	002947	25	997053	20
41	9.065885	1794	10.934115	9.068846	1819	10.931154	10.002961	25	9.997039	19
42	066962	1790	933038	069938	1815	930062	002976	25	997024	18
43	068036	1786	931964	071027	1811	928973	002991	25	997009	17
44	069107	1781	930893	072113	1806	927887	003006	25	996994	16
45	070176	1777	929824	073197	1802	926803	003021	25	996979	15
46	071242	1772	928758	074278	1797	925722	003036	25	996964	14
47	072306	1768	927694	075356	1793	924644	003051	25	996949	13
48	073366	1764	926634	076432	1789	923568	003066	25	996934	12
49	074424	1759	925576	077505	1784	922495	003081	25	996919	11
50	075480	1755	924520	078576	1780	921424	003096	25	996904	10
51	9.076533	1751	10.923467	9.079644	1776	10.920356	10.003111	25	9.996889	9
52	077583	1746	922417	080710	1772	919290	003126	25	996874	8
53	078631	1742	921369	081773	1767	918227	003142	25	996858	7
54	079676	1738	920324	082833	1763	917167	003157	25	996843	6
55	080719	1734	919281	083891	1759	916109	003172	25	996828	5
56	081759	1729	918241	084947	1755	915053	003188	26	996812	4
57	082797	1725	917203	086000	1751	914000	003203	26	996797	3
58	083832	1721	916168	087050	1747	912950	003218	26	996782	2
59	084864	1717	915136	088098	1743	911902	003234	26	996766	1
60	085894	1713	914106	089144	1739	910856	003249	26	996751	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosi
0	9.085894	1713	10.914106	9.089144	1739	10.910856	10.003249	26	9.996
1	086922	1709	913078	090187	1735	909813	003265	26	99
2	087947	1704	912053	091228	1730	908772	003280	26	99
3	088970	1701	911030	092264	1727	907734	003296	26	99
4	089990	1696	910010	093302	1722	906698	003312	26	99
5	091008	1693	908992	094336	1719	905664	003327	26	99
6	092024	1688	907976	095367	1715	904633	003343	26	99
7	093037	1685	906963	096395	1711	903605	003359	26	99
8	094047	1680	905953	097422	1707	902578	003375	26	99
9	095056	1677	904944	098446	1703	901554	003390	26	99
10	096062	1673	903938	099468	1699	900532	003406	26	99
11	9.097065	1668	10.902935	9.100487	1695	10.899513	10.003422	27	9.996
12	098066	1665	901934	101504	1691	898496	003438	27	99
13	099065	1661	900935	102519	1687	897481	003454	27	99
14	100062	1657	899938	103532	1684	896468	003470	27	99
15	101056	1653	898944	104542	1680	895458	003486	27	99
16	102048	1649	897952	105550	1676	894450	003502	27	99
17	103037	1645	896963	106556	1672	893444	003518	27	99
18	104025	1642	895975	107559	1669	892441	003535	27	99
19	105010	1638	894990	108560	1665	891440	003551	27	99
20	105992	1634	894008	109559	1661	890441	003567	27	99
21	9.106973	1631	10.893027	9.110556	1658	10.889444	10.003583	27	9.996
22	107951	1627	892049	111551	1654	888449	003600	27	99
23	108927	1623	891073	112543	1650	887457	003616	27	99
24	109901	1619	890099	113533	1647	886467	003632	27	99
25	110873	1616	889127	114521	1643	885479	003649	27	99
26	111842	1612	888158	115507	1639	884493	003665	27	99
27	112809	1608	887191	116491	1636	883509	003682	28	99
28	113774	1605	886226	117472	1632	882528	003698	28	99
29	114737	1601	885263	118452	1629	881548	003715	28	99
30	115698	1597	884302	119429	1625	880571	003731	28	99
31	9.116656	1594	10.883344	9.120404	1622	10.879596	10.003748	28	9.996
32	117613	1590	882387	121377	1618	878623	003765	28	99
33	118567	1587	881433	122348	1615	877652	003781	28	99
34	119519	1583	880481	123317	1611	876683	003798	28	99
35	120469	1580	879531	124284	1608	875716	003815	28	99
36	121417	1576	878583	125249	1604	874751	003832	28	99
37	122362	1573	877638	126211	1601	873789	003849	28	99
38	123306	1569	876694	127172	1597	872828	003866	28	99
39	124248	1566	875752	128130	1594	871870	003883	28	99
40	125187	1562	874813	129087	1591	870913	003900	28	99
41	9.126125	1559	10.873875	9.130041	1587	10.869959	10.003917	29	9.996
42	127060	1556	872940	130994	1584	869006	003934	29	99
43	127993	1552	872007	131944	1581	868056	003951	29	99
44	128925	1549	871075	132893	1577	867107	003968	29	99
45	129854	1545	870146	133839	1574	866161	003985	29	99
46	130781	1542	869219	134784	1571	865216	004002	29	99
47	131706	1539	868294	135726	1567	864274	004020	29	99
48	132630	1535	867370	136667	1564	863333	004037	29	99
49	133551	1532	866449	137605	1561	862395	004054	29	99
50	134470	1529	865530	138542	1558	861458	004072	29	99
51	9.135387	1525	10.864613	9.139476	1555	10.860524	10.004089	29	9.995
52	136303	1522	863697	140409	1551	859591	004106	29	99
53	137216	1519	862784	141340	1548	858660	004124	29	99
54	138128	1516	861872	142269	1545	857731	004141	29	99
55	139037	1513	860963	143196	1542	856804	004159	29	99
56	139944	1509	860056	144121	1539	855879	004177	29	99
57	140850	1506	859150	145044	1535	854956	004194	29	99
58	141754	1503	858246	145966	1532	854034	004212	29	99
59	142655	1500	857345	146885	1529	853115	004229	29	99
60	143553	1496	856445	147803	1526	852197	004247	30	99
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sin

Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
9.143555	1496	10.856445	9.147803	1526	10.852197	10.004247	30	9.995753	60
144453	1493	855547	148718	1523	851282	004265	30	995735	59
145349	1490	854651	149632	1520	850368	004283	30	995717	58
146243	1487	853757	150544	1517	849456	004301	30	995699	57
147136	1484	852864	151454	1514	848546	004319	30	995681	56
148026	1481	851974	152363	1511	847637	004336	30	995664	55
148915	1478	851085	153269	1508	846731	004354	30	995646	54
149802	1475	850198	154174	1505	845826	004372	30	995628	53
150686	1472	849314	155077	1502	844923	004390	30	995610	52
151569	1469	848431	155978	1499	844022	004409	30	995591	51
152451	1466	847549	156877	1496	843123	004427	30	995573	50
9.153330	1463	10.846670	9.157775	1493	10.842225	10.004445	30	9.995555	49
154208	1460	845792	158671	1490	841329	004463	30	995537	48
155083	1457	844917	159565	1487	840435	004481	30	995519	47
155957	1454	844043	160457	1484	839543	004499	31	995501	46
156830	1451	843170	161347	1481	838653	004518	31	995482	45
157700	1448	842300	162236	1478	837764	004536	31	995464	44
158569	1445	841431	163123	1475	836877	004554	31	995446	43
159435	1442	840565	164008	1473	835992	004573	31	995427	42
160301	1439	839699	164892	1470	835108	004591	31	995409	41
161164	1436	838836	165774	1467	834226	004610	31	995390	40
9.162025	1433	10.837975	9.166654	1464	10.833346	10.004628	31	9.995372	39
162885	1430	837115	167532	1461	832468	004647	31	995353	38
163743	1427	836257	168409	1458	831591	004666	31	995334	37
164600	1424	835400	169284	1455	830716	004684	31	995316	36
165454	1422	834546	170157	1453	829843	004703	31	995297	35
166307	1419	833693	171029	1450	828971	004722	31	995278	34
167159	1416	832841	171899	1447	828101	004740	31	995260	33
168008	1413	831992	172767	1444	827233	004759	31	995241	32
168856	1410	831144	173634	1442	826366	004778	32	995222	31
169702	1407	830298	174499	1439	825501	004797	32	995203	30
9.170547	1405	10.829453	9.175362	1436	10.824638	10.004816	32	9.995184	29
171389	1402	828611	176224	1434	823776	004835	32	995165	28
172230	1399	827770	177084	1431	822916	004854	32	995146	27
173070	1396	826930	177942	1428	822058	004873	32	995127	26
173908	1394	826092	178799	1426	821201	004892	32	995108	25
174744	1391	825256	179655	1423	820345	004911	32	995089	24
175578	1388	824422	180508	1420	819492	004930	32	995070	23
176411	1385	823589	181360	1417	818640	004949	32	995051	22
177242	1383	822758	182211	1415	817789	004968	32	995032	21
178072	1380	821928	183059	1412	816941	004987	32	995013	20
9.178900	1377	10.821100	9.183907	1409	10.816093	10.005007	32	9.994993	19
179726	1374	820274	184752	1407	815248	005026	32	994974	18
180551	1372	819449	185597	1404	814403	005045	32	994955	17
181374	1369	818626	186439	1402	813561	005065	32	994935	16
182196	1367	817804	187280	1399	812720	005084	32	994916	15
183016	1364	816984	188120	1396	811880	005104	33	994896	14
183834	1361	816166	188958	1394	811042	005123	33	994877	13
184651	1359	815349	189794	1391	810206	005143	33	994857	12
185466	1356	814534	190629	1389	809371	005162	33	994838	11
186280	1353	813720	191462	1386	808538	005182	33	994818	10
9.187092	1351	10.812908	9.192294	1384	10.807706	10.005202	33	9.994798	9
187903	1348	812097	193124	1381	806876	005221	33	994779	8
188712	1346	811288	193953	1379	806047	005241	33	994759	7
189519	1343	810481	194780	1376	805220	005261	33	994739	6
190325	1341	809675	195606	1374	804394	005281	33	994719	5
191130	1338	808870	196430	1371	803570	005300	33	994700	4
191933	1336	808067	197253	1369	802747	005320	33	994680	3
192734	1333	807266	198074	1366	801926	005340	33	994660	2
193534	1330	806466	198894	1364	801106	005360	33	994640	1
194332	1328	805668	199713	1361	800287	005380	33	994620	0
Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosi
0	9.194332	1328	10.805668	9.199713	1361	10.800287	10.005380	33	9.994
1	195129	1326	804871	200529	1359	799471	005400	33	99·
2	195925	1323	804075	201345	1356	798655	005420	33	99·
3	196719	1321	803281	202159	1354	797841	005440	34	99·
4	197511	1318	802489	202971	1352	797029	005460	34	99·
5	198302	1316	801698	203782	1349	796218	005481	34	99·
6	199091	1313	800909	204592	1347	795408	005501	34	99·
7	199879	1311	800121	205400	1345	794600	005521	34	99·
8	200666	1308	799334	206207	1342	793793	005541	34	99·
9	201451	1306	798549	207013	1340	792987	005562	34	99·
10	202234	1304	797766	207817	1338	792183	005582	34	99·
11	9.203017	1301	10.796983	9.208619	1335	10.791381	10.005602	34	9.994
12	203797	1299	796203	209420	1333	790580	005623	34	99·
13	204577	1296	795423	210220	1331	789780	005643	34	99·
14	205354	1294	794646	211018	1328	788982	005664	34	99·
15	206131	1292	793869	211815	1326	788185	005684	34	99·
16	206906	1289	793094	212611	1324	787389	005705	34	99·
17	207679	1287	792321	213405	1321	786595	005726	34	99·
18	208452	1285	791548	214198	1319	785802	005746	35	99·
19	209222	1282	790778	214989	1317	785011	005767	35	99·
20	209992	1280	790008	215780	1315	784220	005788	35	99·
21	9.210760	1278	10.789240	9.216568	1312	10.783432	10.005809	35	9.994
22	211526	1275	788474	217356	1310	782644	005829	35	99·
23	212291	1273	787709	218142	1308	781858	005850	35	99·
24	213055	1271	786945	218926	1305	781074	005871	35	99·
25	213818	1268	786182	219710	1303	780290	005892	35	99·
26	214579	1266	785421	220492	1301	779508	005913	35	99·
27	215338	1264	784662	221272	1299	778728	005934	35	99·
28	216097	1261	783903	222052	1297	777948	005955	35	99·
29	216854	1259	783146	222830	1294	777170	005976	35	99·
30	217609	1257	782391	223606	1292	776394	005997	35	99·
31	9.218363	1255	10.781637	9.224382	1290	10.775618	10.006018	35	9.993
32	219116	1253	780884	225156	1288	774844	006040	35	99
33	219868	1250	780132	225929	1286	774071	006061	35	99
34	220618	1248	779382	226700	1284	773300	006082	35	99
35	221367	1246	778633	227471	1281	772529	006103	36	99
36	222115	1244	777885	228239	1279	771761	006125	36	99
37	222861	1242	777139	229007	1277	770993	006146	36	99
38	223606	1239	776394	229773	1275	770227	006168	36	99
39	224349	1237	775651	230539	1273	769461	006189	36	99
40	225092	1235	774908	231302	1271	768698	006211	36	99
41	9.225833	1233	10.774167	9.232065	1269	10.767935	10.006232	36	9.993
42	226573	1231	773427	232826	1267	767174	006254	36	993
43	227311	1228	772689	233586	1265	776414	006275	36	993
44	228048	1226	771952	234345	1262	765655	006297	36	993
45	228784	1224	771216	235103	1260	764897	006319	36	993
46	229518	1222	770482	235859	1258	764141	006340	36	993
47	230252	1220	769748	236614	1256	763386	006362	36	993
48	230984	1218	769016	237368	1254	762632	006384	36	993
49	231714	1216	768286	238120	1252	761880	006406	36	993
50	232444	1214	767556	238872	1250	761128	006428	37	993
51	9.233172	1212	10.766828	9.239622	1248	10.760378	10.006450	37	9.993
52	233899	1209	766101	240371	1246	759629	006472	37	993
53	234625	1207	765375	241118	1244	758882	006494	37	993
54	235349	1205	764651	241865	1242	758135	006516	37	993
55	236073	1203	763927	242610	1240	757390	006538	37	993
56	236795	1201	763205	243354	1238	756646	006560	37	993
57	237515	1199	762485	244097	1236	755903	006582	37	993
58	238235	1197	761765	244839	1234	755161	006604	37	993
59	238953	1195	761047	245579	1232	754421	006626	37	993
60	239670	1193	770330	246319	1230	753681	006649	37	993
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.239670	1193	10.760330	9.246319	1230	10.753681	10.006649	37	9.993351	60
1	240386	1191	759614	247057	1228	752943	006671	37	993329	59
2	241101	1189	758899	247794	1226	752206	006693	37	993307	58
3	241814	1187	758186	248530	1224	751470	006715	37	993285	57
4	242526	1185	757474	249264	1222	750736	006738	37	993262	56
5	243237	1183	756763	249998	1220	750002	006760	37	993240	55
6	243947	1181	756053	250730	1219	749270	006783	38	993217	54
7	244656	1179	755344	251461	1217	748539	006805	38	993195	53
8	245363	1177	754637	252191	1215	747809	006828	38	993172	52
9	246069	1175	753931	252920	1213	747080	006851	38	993149	51
10	246775	1173	753225	253648	1211	746352	006873	38	993127	50
11	9.247478	1171	10.752522	9.254374	1209	10.745626	10.006896	38	9.993104	49
12	248181	1169	751819	255100	1207	744900	006919	38	993081	48
13	248883	1167	751117	255824	1205	744176	006941	38	993059	47
14	249583	1165	750417	256547	1203	743453	006964	38	993036	46
15	250282	1163	749718	257269	1201	742731	006987	38	993013	45
16	250980	1161	749020	257990	1200	742010	007010	38	992990	44
17	251677	1160	748323	258710	1198	741290	007033	38	992967	43
18	252373	1158	747627	259429	1196	740571	007056	38	992944	42
19	253067	1156	746933	260146	1194	739854	007079	38	992921	41
20	253761	1154	746239	260863	1192	739137	007102	38	992898	40
21	9.254453	1152	10.745547	9.261578	1190	10.738422	10.007125	38	9.992875	39
22	255144	1150	744856	262292	1189	737708	007148	39	992852	38
23	255834	1148	744166	263005	1187	736995	007171	39	992829	37
24	256523	1146	743477	263717	1185	736283	007194	39	992806	36
25	257211	1144	742789	264428	1183	735572	007217	39	992783	35
26	257898	1142	742102	265138	1181	734862	007241	39	992759	34
27	258583	1141	741417	265847	1179	734153	007264	39	992736	33
28	259268	1139	740732	266555	1178	733445	007287	39	992713	32
29	259951	1137	740049	267261	1176	732739	007310	39	992690	31
30	260633	1135	739367	267967	1174	732033	007334	39	992666	30
31	9.261314	1133	10.738686	9.268671	1172	10.731329	10.007357	39	9.992643	29
32	261994	1131	738006	269375	1170	730625	007381	39	992619	28
33	262673	1130	737327	270077	1169	729923	007404	39	992596	27
34	263351	1128	736649	270779	1167	729221	007428	39	992572	26
35	264027	1126	735973	271479	1165	728521	007451	39	992549	25
36	264703	1124	735297	272178	1164	727822	007475	39	992525	24
37	265377	1122	734623	272876	1162	727124	007499	39	992501	23
38	266051	1120	733949	273573	1160	726427	007522	40	992478	22
39	266723	1119	733277	274269	1158	725731	007546	40	992454	21
40	267395	1117	732605	274964	1157	725036	007570	40	992430	20
41	9.268065	1115	10.731935	9.275658	1155	10.724342	10.007594	40	9.992406	19
42	268734	1113	731266	276351	1153	723649	007618	40	992382	18
43	269402	1111	730598	277043	1151	722957	007641	40	992359	17
44	270069	1110	729931	277734	1150	722266	007665	40	992335	16
45	270735	1108	729265	278424	1148	721576	007689	40	992311	15
46	271400	1106	728600	279113	1146	720887	007713	40	992287	14
47	272064	1105	727936	279801	1145	720199	007737	40	992263	13
48	272726	1103	727274	280488	1143	719512	007761	40	992239	12
49	273388	1101	726612	281174	1141	718826	007786	40	992214	11
50	274049	1099	725951	281858	1140	718142	007810	40	992190	10
51	9.274708	1098	10.725292	9.282542	1138	10.717458	10.007834	40	9.992166	9
52	275367	1096	724633	283225	1136	716775	007858	40	992142	8
53	276024	1094	723976	283907	1135	716093	007882	41	992118	7
54	276681	1092	723319	284588	1133	715412	007907	41	992093	6
55	277337	1091	722663	285268	1131	714732	007931	41	992069	5
56	277991	1089	722009	285947	1130	714053	007956	41	992044	4
57	278644	1087	721356	286624	1128	713376	007980	41	992020	3
58	279297	1086	720703	287301	1126	712699	008004	41	991996	2
59	279948	1084	720052	287977	1125	712023	008029	41	991971	1
60	280599	1082	719401	288652	1123	711348	008053	41	991947	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosin
0	9.280599	1082	10.719401	9.288652	1123	10.711348	10.008053	41	9.9919
1	281248	1081	718752	289326	1122	710674	008078	41	991
2	281897	1079	718103	289999	1120	710001	008103	41	991
3	282544	1077	717456	290671	1118	709329	008127	41	991
4	283190	1076	716810	291342	1117	708658	008152	41	991
5	283836	1074	716164	292013	1115	707987	008177	41	991
6	284480	1072	715520	292682	1114	707318	008201	41	991
7	285124	1071	714876	293350	1112	706650	008226	41	991
8	285766	1069	714234	294017	1111	705983	008251	42	991
9	286408	1067	713592	294684	1109	705316	008276	42	991
10	287048	1066	712952	295349	1107	704651	008301	42	991
11	9.287687	1064	10.712313	9.296013	1106	10.703987	10.008326	42	9.9916
12	288326	1063	711674	296677	1104	703323	008351	42	991
13	288964	1061	711036	297339	1103	702661	008376	42	991
14	289600	1059	710400	298001	1101	701999	008401	42	991
15	290236	1058	709764	298662	1100	701338	008426	42	991
16	290870	1056	709130	299322	1098	700678	008451	42	991
17	291504	1054	708496	299980	1096	700020	008476	42	991
18	292137	1053	707863	300638	1095	699362	008502	42	991
19	292768	1051	707232	301295	1093	698705	008527	42	991
20	293399	1050	706601	301951	1092	698049	008552	42	991
21	9.294029	1048	10.705971	9.302607	1090	10.697393	10.008578	42	9.9914
22	294658	1047	705342	303261	1089	696739	008603	42	991
23	295286	1045	704714	303914	1087	696086	008628	42	991
24	295913	1043	704087	304567	1086	695433	008654	43	991
25	296539	1042	703461	305218	1084	694782	008679	43	991
26	297164	1040	702836	305869	1083	694131	008705	43	991
27	297788	1039	702212	306519	1081	693481	008730	43	991
28	298412	1037	701588	307168	1080	692832	008756	43	991
29	299034	1036	700966	307815	1078	692185	008782	43	991
30	299655	1034	700345	308463	1077	691537	008807	43	991
31	9.300276	1032	10.699724	9.309109	1075	10.690891	10.008833	43	9.991
32	300895	1031	699105	309754	1074	690246	008859	43	991
33	301514	1030	698486	310398	1073	689602	008885	43	991
34	302132	1028	697868	311042	1071	688958	008910	43	991
35	302748	1026	697252	311685	1070	688315	008936	43	991
36	303364	1025	696636	312327	1068	687673	008962	43	991
37	303979	1023	696021	312967	1067	687033	008988	43	991
38	304593	1022	695407	313608	1065	686392	009014	43	990
39	305207	1020	694793	314247	1064	685753	009040	43	990
40	305819	1019	694181	314885	1062	685115	009066	44	990
41	9.306430	1017	10.693570	9.315523	1061	10.684477	10.009092	44	9.990
42	307041	1016	692959	316159	1060	683841	009118	44	990
43	307650	1014	692350	316795	1058	683205	009145	44	990
44	308259	1013	691741	317430	1057	682570	009171	44	990
45	308867	1011	691133	318064	1055	681936	009197	44	990
46	309474	1010	690526	318697	1054	681303	009223	44	990
47	310080	1009	689920	319329	1053	680671	009250	44	990
48	310685	1007	689315	319961	1051	680039	009276	44	990
49	311289	1006	688711	320592	1050	679408	009303	44	990
50	311893	1004	688107	321222	1048	678778	009329	44	990
51	9.312495	1003	10.687505	9.321851	1047	10.678149	10.009356	44	9.990
52	313097	1001	686903	322479	1045	677521	009382	44	990
53	313698	1000	686302	323106	1044	676894	009409	44	990
54	314297	998	685703	323733	1043	676267	009435	44	990
55	314896	997	685104	324358	1041	675642	009462	44	990
56	315495	996	684505	324983	1040	675017	009489	45	990
57	316092	994	683908	325607	1039	674393	009515	45	990
58	316689	993	683311	326231	1037	673769	009542	45	990
59	317284	991	682716	326853	1036	673147	009569	45	990
60	317879	990	682121	327475	1035	672525	009596	45	990
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sin

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.
0	9.317879	990	10.682121	9.327474	1035	10.672526	10.009596	45	9.990404
1	318473	988	681527	328095	1033	671905	009622	45	990378
2	319066	987	680934	328715	1032	671285	009649	45	990351
3	319658	986	680342	329334	1030	670666	009676	45	990324
4	320249	984	679751	329953	1029	670047	009703	45	990297
5	320840	983	679160	330570	1028	669430	009730	45	990270
6	321430	982	678570	331187	1026	668813	009757	45	990243
7	322019	980	677981	331803	1025	668197	009785	45	990215
8	322607	979	677393	332418	1024	667582	009812	45	990188
9	323194	977	676806	333033	1023	666967	009839	45	990161
10	323780	976	676220	333646	1021	666354	009866	45	990134
11	9.324366	975	10.675634	9.334259	1020	10.665741	10.009893	46	9.990107
12	324950	973	675050	334871	1019	665129	009921	46	990079
13	325534	972	674466	335482	1017	664518	009948	46	990052
14	326117	970	673883	336093	1016	663907	009975	46	990025
15	326700	969	673300	336702	1015	663298	010003	46	989997
16	327281	968	672719	337311	1013	662689	010030	46	989970
17	327862	966	672138	337919	1012	662081	010058	46	989942
18	328442	965	671558	338527	1011	661473	010085	46	989915
19	329021	964	670979	339133	1010	660867	010113	46	989887
20	329599	962	670401	339739	1008	660261	010140	46	989860
21	9.330176	961	10.669824	9.340344	1007	10.659656	10.010168	46	9.989832
22	330753	960	669247	340948	1006	659052	010196	46	989804
23	331329	958	668671	341552	1004	658448	010223	46	989777
24	331903	957	668097	342155	1003	657845	010251	46	989749
25	332478	956	667522	342757	1002	657243	010279	46	989721
26	333051	954	666949	343358	1001	656642	010307	47	989693
27	333624	953	666376	343958	999	656042	010335	47	989665
28	334195	952	665805	344558	998	655442	010363	47	989637
29	334766	950	665234	345157	997	654843	010391	47	989609
30	335337	949	664663	345755	996	654245	010418	47	989582
31	9.335906	948	10.664094	9.346353	994	10.653647	10.010447	47	9.989553
32	336475	946	663525	346949	993	653051	010475	47	989525
33	337043	945	662957	347545	992	652455	010503	47	989497
34	337610	944	662390	348141	991	651859	010531	47	989469
35	338176	943	661824	348735	990	651265	010559	47	989441
36	338742	941	661258	349329	988	650671	010587	47	989413
37	339307	940	660693	349922	987	650078	010615	47	989385
38	339871	939	660129	350514	986	649486	010644	47	989356
39	340434	937	659566	351106	985	648894	010672	47	989328
40	340996	936	659004	351697	983	648303	010700	47	989300
41	9.341558	935	10.658442	9.352287	982	10.647713	10.010729	47	9.989271
42	342119	934	657881	352876	981	647124	010757	47	989243
43	342679	932	657321	353465	980	646535	010786	48	989214
44	343239	931	656761	354053	979	645947	010814	48	989186
45	343797	930	656203	354640	978	645360	010843	48	989157
46	344355	929	655645	355227	976	644773	010872	48	989128
47	344912	927	655088	355813	975	644187	010900	48	989100
48	345469	926	654531	356398	974	643602	010929	48	989071
49	346024	925	653976	356982	973	643018	010958	48	989042
50	346579	924	653421	357566	971	642434	010986	48	989014
51	9.347134	922	10.652866	9.358149	970	10.641851	10.011015	48	9.988985
52	347687	921	652313	358731	969	641269	011044	48	988956
53	348240	920	651760	359313	968	640687	011073	48	988927
54	348792	919	651208	359893	967	640107	011102	48	988898
55	349343	917	650657	360474	966	639526	011131	48	988869
56	349893	916	650107	361053	965	638947	011160	48	988840
57	350443	915	649557	361632	963	638368	011189	48	988811
58	350992	914	649008	362210	962	637790	011218	49	988782
59	351540	913	648460	362787	961	637213	011247	49	988753
60	352088	911	647912	363364	960	636636	011276	49	9887-24
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	8.940296	2403	11.059704	8.941952	2421	11.058048	10.001656	18	9.998344	60
1	941738	2394	058262	943404	2413	056596	001667	19	998333	59
2	943174	2387	056826	944852	2405	055148	001678	19	998322	58
3	944606	2379	055394	946295	2397	053705	001689	19	998311	57
4	946034	2371	053966	947734	2390	052266	001700	19	998300	56
5	947456	2363	052544	949168	2382	050832	001711	19	998289	55
6	948874	2355	051126	950597	2374	049403	001723	19	998277	54
7	950287	2348	049713	952021	2367	047979	001734	19	998266	53
8	951696	2340	048304	953441	2359	046559	001745	19	998255	52
9	953100	2332	046900	954856	2351	045144	001757	19	998243	51
10	954499	2325	045501	956267	2344	043733	001768	19	998232	50
11	8.955894	2317	11.044106	8.957674	2336	11.042326	10.001780	19	9.998220	49
12	957284	2310	042716	959075	2329	040925	001791	19	998209	48
13	958670	2302	041330	960473	2322	039527	001803	19	998197	47
14	960052	2295	039948	961866	2314	038134	001814	19	998186	46
15	961429	2288	038571	963255	2307	036745	001826	19	998174	45
16	962801	2280	037199	964639	2300	035361	001837	19	998163	44
17	964170	2273	035830	966019	2293	033981	001849	20	998151	43
18	965534	2266	034466	967394	2286	032606	001861	20	998139	42
19	966893	2259	033107	968766	2279	031234	001872	20	998128	41
20	968249	2252	031751	970133	2272	029867	001884	20	998116	40
21	8.969600	2245	11.030400	8.971496	2265	11.028504	10.001896	20	9.998104	39
22	970947	2238	029053	972855	2258	027145	001908	20	998092	38
23	972289	2231	027711	974209	2251	025791	001920	20	998080	37
24	973628	2224	026372	975560	2244	024440	001932	20	998068	36
25	974962	2217	025038	976906	2237	023094	001944	20	998056	35
26	976293	2210	023707	978248	2230	021752	001956	20	998044	34
27	977619	2203	022381	979586	2223	020414	001968	20	998032	33
28	978941	2197	021059	980921	2217	019079	001980	20	998020	32
29	980259	2190	019741	982251	2210	017749	001992	20	998008	31
30	981573	2183	018427	983577	2204	016423	002004	20	997996	30
31	8.982883	2177	11.017117	8.984899	2197	11.015101	10.002016	20	9.997984	29
32	984189	2170	015811	986217	2191	013783	002028	20	997972	28
33	985491	2163	014509	987532	2184	012468	002041	21	997959	27
34	986789	2157	013211	988842	2178	011158	002053	21	997947	26
35	988083	2150	011917	990149	2171	009851	002065	21	997935	25
36	989374	2144	010626	991451	2165	008549	002078	21	997922	24
37	990660	2138	009340	992750	2159	007250	002090	21	997910	23
38	991943	2131	008057	994045	2152	005955	002103	21	997897	22
39	993222	2125	006778	995337	2146	004663	002115	21	997885	21
40	994497	2119	005503	996624	2140	003376	002127	21	997873	20
41	8.995768	2112	11.004232	8.997908	2134	11.002092	10.002140	21	9.997860	19
42	997036	2106	002964	999188	2127	000812	002153	21	997847	18
43	998299	2100	001701	9.000465	2121	10.999535	002165	21	997835	17
44	999560	2094	000440	001738	2115	998262	002178	21	997822	16
45	9.000816	2088	10.999184	003007	2109	996993	002191	21	997809	15
46	002069	2082	997931	004272	2103	995728	002203	21	997797	14
47	003318	2076	996682	005534	2097	994466	002216	21	997784	13
48	004563	2070	995437	006792	2091	993208	002229	21	997771	12
49	005805	2064	994195	008047	2085	991953	002242	21	997758	11
50	007044	2058	992956	009298	2080	990702	002255	22	997745	10
51	9.008278	2052	10.991722	9.010546	2074	10.989454	10.002268	22	9.997732	9
52	009510	2046	990490	011790	2068	988210	002281	22	997719	8
53	010737	2040	989263	013031	2062	986969	002294	22	997706	7
54	011962	2034	988038	014268	2056	985732	002307	22	997693	6
55	013182	2029	986818	015502	2051	984498	002320	22	997680	5
56	014400	2023	985600	016732	2045	983268	002333	22	997667	4
57	015613	2017	984387	017959	2039	982041	002346	22	997654	3
58	016824	2012	983176	019183	2034	980817	002359	22	997641	2
59	018031	2006	981969	020403	2028	979597	002372	22	997628	1
60	019235	2000	980765	021620	2023	978380	002386	22	997614	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
9.019235	2000	10.980765	9.021620	2023	10.978380	10.002386	22	9.997614	60
020435	1995	979565	022834	2017	977166	002399	22	997601	59
021632	1989	978368	024044	2011	975956	002412	22	997588	58
022825	1984	977175	025251	2006	974749	002426	22	997574	57
024016	1978	975984	026455	2001	973545	002439	22	997561	56
025203	1973	974797	027655	1995	972345	002453	22	997547	55
026386	1967	973614	028852	1990	971148	002466	23	997534	54
027567	1962	972433	030046	1985	969954	002480	23	997520	53
028744	1957	971256	031237	1979	968763	002493	23	997507	52
029918	1951	970082	032425	1974	967575	002507	23	997493	51
031089	1946	968911	033609	1969	966391	002520	23	997480	50
9.032257	1941	10.967743	9.034791	1964	10.965209	10.002534	23	9.997466	49
033421	1935	966579	035969	1958	964031	002548	23	997452	48
034582	1930	965418	037144	1953	962856	002561	23	997439	47
035741	1925	964259	038316	1948	961684	002575	23	997425	46
036896	1920	963104	039485	1943	960515	002589	23	997411	45
038048	1915	961952	040651	1938	959349	002603	23	997397	44
039197	1910	960803	041813	1933	958187	002617	23	997383	43
040342	1905	959658	042973	1928	957027	002631	23	997369	42
041485	1899	958515	044130	1923	955870	002645	23	997355	41
042625	1895	957375	045284	1918	954716	002659	23	997341	40
9.043762	1889	10.956238	9.046434	1913	10.953566	10.002673	24	9.997327	39
044895	1884	955105	047582	1908	952418	002687	24	997313	38
046026	1879	953974	048727	1903	951273	002701	24	997299	37
047154	1875	952846	049869	1898	950131	002715	24	997285	36
048279	1870	951721	051008	1894	948992	002729	24	997271	35
049400	1865	950600	052144	1889	947856	002743	24	997257	34
050519	1860	949481	053277	1884	946723	002758	24	997242	33
051635	1855	948365	054407	1879	945593	002772	24	997228	32
052749	1850	947251	055535	1874	944465	002786	24	997214	31
053859	1846	946141	056659	1870	943341	002801	24	997199	30
9.054966	1841	10.945034	9.057781	1865	10.942219	10.002815	24	9.997185	29
056071	1836	943929	058900	1860	941100	002830	24	997170	28
057172	1831	942828	060016	1855	939984	002844	24	997156	27
058271	1827	941729	061130	1851	938870	002859	24	997141	26
059367	1822	940633	062240	1846	937760	002873	24	997127	25
060460	1818	939540	063348	1842	936652	002888	24	997112	24
061551	1813	938449	064453	1837	935547	002902	24	997098	23
062639	1808	937361	065556	1833	934444	002917	25	997083	22
063724	1804	936276	066655	1828	933345	002932	25	997068	21
064806	1799	935194	067752	1824	932248	002947	25	997053	20
9.065885	1794	10.934115	9.068846	1819	10.931154	10.002961	25	9.997039	19
066962	1790	933038	069938	1815	930062	002976	25	997024	18
068036	1786	931964	071027	1811	928973	002991	25	997009	17
069107	1781	930893	072113	1806	927887	003006	25	996994	16
070176	1777	929824	073197	1802	926803	003021	25	996979	15
071242	1772	928758	074278	1797	925722	003036	25	996964	14
072306	1768	927694	075356	1793	924644	003051	25	996949	13
073366	1764	926634	076432	1789	923568	003066	25	996934	12
074424	1759	925576	077505	1784	922495	003081	25	996919	11
075480	1755	924520	078574	1780	921424	003096	25	996904	10
9.076533	1751	10.923467	9.079644	1776	10.920356	10.003111	25	9.996889	9
077583	1746	922417	080710	1772	919290	003126	25	996874	8
078631	1742	921369	081773	1767	918227	003142	25	996858	7
079676	1738	920324	082833	1763	917167	003157	25	996843	6
080719	1734	919281	083891	1759	916109	003172	25	996828	5
081759	1729	918241	084947	1755	915053	003188	26	996812	4
082797	1725	917203	086000	1751	914000	003203	26	996797	3
083832	1721	916168	087050	1747	912950	003218	26	996782	2
084864	1717	915136	088098	1743	911902	003234	26	996766	1
085894	1713	914106	089144	1739	910856	003249	26	996751	0
Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Co
0	9.085894	1713	10.914106	9.089144	1739	10.910856	10.003249	26	9.9
1	086922	1709	913078	090187	1735	909813	003265	26	
2	087947	1704	912053	091228	1730	908772	003280	26	
3	088970	1701	911030	092266	1727	907734	003296	26	
4	089990	1696	910010	093302	1722	906698	003312	26	
5	091008	1693	908992	094336	1719	905664	003327	26	
6	092024	1688	907976	095367	1715	904633	003343	26	
7	093037	1685	906963	096395	1711	903605	003359	26	
8	094047	1680	905953	097422	1707	902578	003375	26	
9	095056	1677	904944	098446	1703	901554	003390	26	
10	096062	1673	903938	099468	1699	900532	003406	26	
11	9.097065	1668	10.902935	9.100487	1695	10.899513	10.003422	27	9.9
12	098066	1665	901934	101504	1691	898496	003438	27	
13	099065	1661	900935	102519	1687	897481	003454	27	
14	100062	1657	899938	103532	1684	896468	003470	27	
15	101056	1653	898944	104542	1680	895458	003486	27	
16	102048	1649	897952	105550	1676	894450	003502	27	
17	103037	1645	896963	106556	1672	893444	003518	27	
18	104025	1642	895975	107559	1669	892441	003535	27	
19	105010	1638	894990	108560	1665	891440	003551	27	
20	105992	1634	894008	109559	1661	890441	003567	27	
21	9.106973	1631	10.893027	9.110556	1658	10.889444	10.003583	27	9.9
22	107951	1627	892049	111551	1654	888449	003600	27	
23	108927	1623	891073	112543	1650	887457	003616	27	
24	109901	1619	890099	113533	1647	886467	003632	27	
25	110873	1616	889127	114521	1643	885479	003649	27	
26	111842	1612	888158	115507	1639	884493	003665	27	
27	112809	1608	887191	116491	1636	883509	003682	28	
28	113774	1605	886226	117472	1632	882528	003698	28	
29	114737	1601	885263	118452	1629	881548	003715	28	
30	115698	1597	884302	119429	1625	880571	003731	28	
31	9.116656	1594	10.883344	9.120404	1622	10.879596	10.003748	28	9.9
32	117613	1590	882387	121377	1618	878623	003765	28	
33	118567	1587	881433	122348	1615	877652	003781	28	
34	119519	1583	880481	123317	1611	876683	003798	28	
35	120469	1580	879531	124284	1608	875716	003815	28	
36	121417	1576	878583	125249	1604	874751	003832	28	
37	122362	1573	877638	126211	1601	873789	003849	28	
38	123306	1569	876694	127172	1597	872828	003866	28	
39	124248	1566	875752	128130	1594	871870	003883	28	
40	125187	1562	874813	129087	1591	870913	003900	28	
41	9.126125	1559	10.873875	9.130041	1587	10.869959	10.003917	29	9.9
42	127060	1556	872940	130994	1584	869006	003934	29	
43	127993	1552	872007	131944	1581	868056	003951	29	
44	128925	1549	871075	132893	1577	867107	003968	29	
45	129854	1545	870146	133839	1574	866161	003985	29	
46	130781	1542	869219	134784	1571	865216	004002	29	
47	131706	1539	868294	135726	1567	864274	004020	29	
48	132630	1535	867370	136667	1564	863333	004037	29	
49	133551	1532	866449	137605	1561	862395	004054	29	
50	134470	1529	865530	138542	1558	861458	004072	29	
51	9.135387	1525	10.864613	9.139476	1555	10.860524	10.004089	29	9.9
52	136303	1522	863697	140409	1551	859591	004106	29	
53	137216	1519	862784	141340	1548	858660	004124	29	
54	138128	1516	861872	142269	1545	857731	004141	29	
55	139037	1513	860963	143196	1542	856804	004159	29	
56	139944	1509	860056	144121	1539	855879	004177	29	
57	140850	1506	859150	145044	1535	854956	004194	29	
58	141754	1503	858246	145966	1532	854034	004212	29	
59	142655	1500	857345	146885	1529	853115	004229	29	
60	143555	1496	856445	147803	1526	852197	004247	30	
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		S

	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
	9.143555	1496	10.856445	9.147803	1526	10.852197	10.004247	30	9.995753	60
	144453	1493	855547	148718	1523	851282	004265	30	995735	59
	145349	1490	854651	149632	1520	850368	004283	30	995717	58
	146243	1487	853757	150544	1517	849456	004301	30	995699	57
	147136	1484	852864	151454	1514	848546	004319	30	995681	56
	148026	1481	851974	152363	1511	847637	004336	30	995664	55
	148915	1478	851085	153269	1508	846731	004354	30	995646	54
	149802	1475	850198	154174	1505	845826	004372	30	995628	53
	150686	1472	849314	155077	1502	844923	004390	30	995610	52
	151569	1469	848431	155978	1499	844022	004409	30	995591	51
	152451	1466	847549	156877	1496	843123	004427	30	995573	50
	9.153330	1463	10.846670	9.157775	1493	10.842225	10.004445	30	9.995555	49
	154208	1460	845792	158671	1490	841329	004463	30	995537	48
	155083	1457	844917	159565	1487	840435	004481	30	995519	47
	155957	1454	844043	160457	1484	839543	004499	31	995501	46
	156830	1451	843170	161347	1481	838653	004518	31	995482	45
	157700	1448	842300	162236	1478	837764	004536	31	995464	44
	158569	1445	841431	163123	1475	836877	004554	31	995446	43
	159435	1442	840565	164008	1473	835992	004573	31	995427	42
	160301	1439	839699	164892	1470	835108	004591	31	995409	41
	161164	1436	838836	165774	1467	834226	004610	31	995390	40
	9.162025	1433	10.837975	9.166654	1464	10.833346	10.004628	31	9.995372	39
	162885	1430	837115	167532	1461	832468	004647	31	995353	38
	163743	1427	836257	168409	1458	831591	004666	31	995334	37
	164600	1424	835400	169284	1455	830716	004684	31	995316	36
	165454	1422	834546	170157	1453	829843	004703	31	995297	35
	166307	1419	833693	171029	1450	828971	004722	31	995278	34
	167159	1416	832841	171899	1447	828101	004740	31	995260	33
	168008	1413	831992	172767	1444	827233	004759	31	995241	32
	168856	1410	831144	173634	1442	826366	004778	32	995222	31
	169702	1407	830298	174499	1439	825501	004797	32	995203	30
	9.170547	1405	10.829453	9.175362	1436	10.824638	10.004816	32	9.995184	29
	171389	1402	828611	176224	1434	823776	004835	32	995165	28
	172230	1399	827770	177084	1431	822916	004854	32	995146	27
	173070	1396	826930	177942	1428	822058	004873	32	995127	26
	173908	1394	826092	178799	1426	821201	004892	32	995108	25
	174744	1391	825256	179655	1423	820345	004911	32	995089	24
	175578	1388	824422	180508	1420	819492	004930	32	995070	23
	176411	1385	823589	181360	1417	818640	004949	32	995051	22
	177242	1383	822758	182211	1415	817789	004968	32	995032	21
	178072	1380	821928	183059	1412	816941	004987	32	995013	20
	9.178900	1377	10.821100	9.183907	1409	10.816093	10.005007	32	9.994993	19
	179726	1374	820274	184752	1407	815248	005026	32	994974	18
	180551	1372	819449	185597	1404	814403	005045	32	994955	17
	181374	1369	818626	186439	1402	813561	005065	32	994935	16
	182196	1367	817804	187280	1399	812720	005084	32	994916	15
	183016	1364	816984	188120	1396	811880	005104	33	994896	14
	183834	1361	816166	188958	1394	811042	005123	33	994877	13
	184651	1359	815349	189794	1391	810206	005143	33	994857	12
	185466	1356	814534	190629	1389	809371	005162	33	994838	11
	186280	1353	813720	191462	1386	808538	005182	33	994818	10
	9.187092	1351	10.812908	9.192294	1384	10.807706	10.005202	33	9.994798	9
	187903	1348	812097	193124	1381	806876	005221	33	994779	8
	188712	1346	811288	193953	1379	806047	005241	33	994759	7
	189519	1343	810481	194780	1376	805220	005261	33	994739	6
	190325	1341	809675	195606	1374	804394	005281	33	994719	5
	191130	1338	808870	196430	1371	803570	005300	33	994700	4
	191933	1336	808067	197253	1369	802747	005320	33	994680	3
	192734	1333	807266	198074	1366	801926	005340	33	994660	2
	193534	1330	806466	198894	1364	801106	005360	33	994640	1
	194332	1328	805668	199713	1361	800287	005380	33	994620	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cos
0	9.194332	1328	10.805668	9.199713	1361	10.800287	10.005380	33	9.99
1	195129	1326	804871	200529	1359	799471	005400	33	9
2	195925	1323	804075	201345	1356	798655	005420	33	9
3	196719	1321	803281	202159	1354	797841	005440	34	9
4	197511	1318	802489	202971	1352	797029	005460	34	9
5	198302	1316	801698	203782	1349	796218	005481	34	9
6	199091	1313	800909	204592	1347	795408	005501	34	9
7	199879	1311	800121	205400	1345	794600	005521	34	9
8	200666	1308	799334	206207	1342	793793	005541	34	9
9	201451	1306	798549	207013	1340	792987	005562	34	9
10	202234	1304	797766	207817	1338	792183	005582	34	9
11	9.203017	1301	10.796983	9.208619	1335	10.791381	10.005602	34	9.99
12	203797	1299	796203	209420	1333	790580	005623	34	9
13	204577	1296	795423	210220	1331	789780	005643	34	9
14	205354	1294	794646	211018	1328	788982	005664	34	9
15	206131	1292	793869	211815	1326	788185	005684	34	9
16	206906	1289	793094	212611	1324	787389	005705	34	9
17	207679	1287	792321	213405	1321	786595	005726	34	9
18	208452	1285	791548	214198	1319	785802	005746	35	9
19	209222	1282	790778	214989	1317	785011	005767	35	9
20	209992	1280	790008	215780	1315	784220	005788	35	9
21	9.210760	1278	10.789240	9.216568	1312	10.783432	10.005809	35	9.99
22	211526	1275	788474	217356	1310	782644	005829	35	9
23	212291	1273	787709	218142	1308	781858	005850	35	9
24	213055	1271	786945	218926	1305	781074	005871	35	9
25	213818	1268	786182	219710	1303	780290	005892	35	9
26	214579	1266	785421	220492	1301	779508	005913	35	9
27	215338	1264	784662	221272	1299	778728	005934	35	9
28	216097	1261	783903	222052	1297	777948	005955	35	9
29	216854	1259	783146	222830	1294	777170	005976	35	9
30	217609	1257	782391	223606	1292	776394	005997	35	9
31	9.218363	1255	10.781637	9.224382	1290	10.775618	10.006018	35	9.99
32	219116	1253	780884	225156	1288	774844	006040	35	9
33	219868	1250	780132	225929	1286	774071	006061	35	9
34	220618	1248	779382	226700	1284	773300	006082	35	9
35	221367	1246	778633	227471	1281	772529	006103	36	9
36	222115	1244	777885	228239	1279	771761	006125	36	9
37	222861	1242	777139	229007	1277	770993	006146	36	9
38	223606	1239	776394	229773	1275	770227	006168	36	9
39	224349	1237	775651	230539	1273	769461	006189	36	9
40	225092	1235	774908	231302	1271	768698	006211	36	9
41	9.225833	1233	10.774167	9.232065	1269	10.767935	10.006232	36	9.99
42	226573	1231	773427	232826	1267	767174	006254	36	9
43	227311	1228	772689	233586	1265	776414	006275	36	9
44	228048	1226	771952	234345	1262	765655	006297	36	9
45	228784	1224	771216	235103	1260	764897	006319	36	9
46	229518	1222	770482	235859	1258	764141	006340	36	9
47	230252	1220	769748	236614	1256	763386	006362	36	9
48	230984	1218	769016	237368	1254	762632	006384	36	9
49	231714	1216	768286	238120	1252	761880	006406	36	9
50	232444	1214	767556	238872	1250	761128	006428	37	9
51	9.233172	1212	10.766828	9.239622	1248	10.760378	10.006450	37	9.99
52	233899	1209	766101	240371	1246	759629	006472	37	9
53	234625	1207	765375	241118	1244	758882	006494	37	9
54	235349	1205	764651	241865	1242	758135	006516	37	9
55	236073	1203	763927	242610	1240	757390	006538	37	9
56	236795	1201	763205	243354	1238	756646	006560	37	9
57	237515	1199	762485	244097	1236	755903	006582	37	9
58	238235	1197	761765	244839	1234	755161	006604	37	9
59	238953	1195	761047	245579	1232	754421	006626	37	9
60	*239670*	*1193*	770330	246319	1230	753681	006649	37	9
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sin

80 Degrees.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.489982	648	10.510018	9.511776	716	10.488224	10.021794	68	9.978206	60
1	490371	648	509629	512206	716	487794	021835	68	978165	59
2	490759	647	509241	512635	715	487365	021876	68	978124	58
3	491147	646	508853	513064	714	486936	021917	69	978083	57
4	491535	646	508465	513493	714	486507	021958	69	978042	56
5	491922	645	508078	513921	713	486079	021999	69	978001	55
6	492308	644	507692	514349	713	485651	022041	69	977959	54
7	492695	644	507305	514777	712	485223	022082	69	977918	53
8	493081	643	506919	515204	712	484796	022123	69	977877	52
9	493466	642	506534	515631	711	484369	022165	69	977835	51
10	493851	642	506149	516057	710	483943	022206	69	977794	50
11	9.494236	641	10.505764	9.516484	710	10.483516	10.022248	69	9.977752	49
12	494621	641	505379	516910	709	483090	022289	69	977711	48
13	495005	640	504995	517335	709	482665	022331	69	977669	47
14	495388	639	504612	517761	708	482239	022372	69	977628	46
15	495772	639	504228	518185	708	481815	022414	69	977586	45
16	496154	638	503846	518610	707	481390	022456	70	977544	44
17	496537	637	503463	519034	706	480966	022497	70	977503	43
18	496919	637	503081	519458	706	480542	022539	70	977461	42
19	497301	636	502699	519882	705	480118	022581	70	977419	41
20	497682	636	502318	520305	705	479695	022623	70	977377	40
21	9.498064	635	10.501936	9.520728	704	10.479272	10.022665	70	9.977335	39
22	498444	634	501556	521151	704	478849	022707	70	977293	38
23	498825	634	501175	521573	703	478427	022749	70	977251	37
24	499204	633	500796	521995	703	478005	022791	70	977209	36
25	499584	632	500416	522417	702	477583	022833	70	977167	35
26	499963	632	500037	522838	702	477162	022875	70	977125	34
27	500342	631	499658	523259	701	476741	022917	70	977083	33
28	500721	631	499279	523680	701	476320	022959	70	977041	32
29	501099	630	498901	524100	700	475900	023001	70	976999	31
30	501476	629	498524	524520	699	475480	023043	70	976957	30
31	9.501854	629	10.498146	9.524939	699	10.475061	10.023086	70	9.976914	29
32	502231	628	497769	525359	698	474641	023128	71	976872	28
33	502607	628	497393	525778	698	474222	023170	71	976830	27
34	502984	627	497016	526197	697	473803	023213	71	976787	26
35	503360	626	496640	526615	697	473385	023255	71	976745	25
36	503735	626	496265	527033	696	472967	023298	71	976702	24
37	504110	625	495890	527451	696	472549	023340	71	976660	23
38	504485	625	495515	527868	695	472132	023383	71	976617	22
39	504860	624	495140	528285	695	471715	023426	71	976574	21
40	505234	623	494766	528702	694	471298	023468	71	976532	20
41	9.505608	623	10.494392	9.529119	694	10.470881	10.023511	71	9.976489	19
42	505981	622	494019	529535	693	470465	023554	71	976446	18
43	506354	622	493646	529950	693	470050	023596	71	976404	17
44	506727	621	493273	530366	692	469634	023639	71	976361	16
45	507099	620	492901	530781	691	469219	023682	71	976318	15
46	507471	620	492529	531196	691	468804	023725	71	976275	14
47	507843	619	492157	531611	690	468389	023768	72	976232	13
48	508214	619	491786	532025	690	467975	023811	72	976189	12
49	508585	618	491415	532439	689	467561	023854	72	976146	11
50	508956	618	491044	532853	689	467147	023897	72	976103	10
51	9.509326	617	10.490674	9.533266	688	10.466734	10.023940	72	9.976060	9
52	509696	616	490304	533679	688	466321	023983	72	976017	8
53	510065	616	489935	534092	687	465908	024026	72	975974	7
54	510434	615	489566	534504	687	465496	024070	72	975930	6
55	510803	615	489197	534916	686	465084	024113	72	975887	5
56	511172	614	488828	535328	686	464672	024156	72	975844	4
57	511540	613	488460	535739	685	464261	024200	72	975800	3
58	511907	613	488093	536150	685	463850	024243	72	975757	2
59	512275	612	487725	536561	684	463439	024286	72	975714	1
60	512642	612	487358	536972	684	463028	024330	72	975670	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.512642	612	10.487358	9.536972	684	10.463028	10.024330	73	9.975670	60
1	513004	611	486991	537382	683	462618	024373	73	975627	59
2	513375	611	486625	537792	683	462208	024417	73	975583	58
3	513741	610	486259	538202	682	461798	024461	73	975539	57
4	514107	609	485893	538611	682	461389	024504	73	975496	56
5	514472	609	485528	539020	681	460980	024548	73	975452	55
6	514837	608	485163	539429	681	460571	024592	73	975408	54
7	515202	608	484798	539837	680	460163	024635	73	975365	53
8	515566	607	484434	540245	680	459755	024679	73	975321	52
9	515930	607	484070	540653	679	459347	024723	73	975277	51
10	516294	606	483706	541061	679	458939	024767	73	975233	50
11	9.516657	605	10.483343	9.541468	678	10.458532	10.024811	73	9.975189	49
12	517020	605	482980	541875	678	458125	024855	73	975145	48
13	517382	604	482618	542281	677	457719	024899	73	975101	47
14	517745	604	482255	542688	677	457312	024943	73	975057	46
15	518107	603	481893	543094	676	456906	024987	73	975013	45
16	518468	603	481532	543499	676	456501	025031	74	974969	44
17	518829	602	481171	543905	675	456095	025075	74	974925	43
18	519190	601	480810	544310	675	455690	025120	74	974880	42
19	519551	601	480449	544715	674	455285	025164	74	974836	41
20	519911	600	480089	545119	674	454881	025208	74	974792	40
21	9.520271	600	10.479729	9.545524	673	10.454476	10.025252	74	9.974748	39
22	520631	599	479369	545928	673	454072	025297	74	974703	38
23	520990	599	479010	546331	672	453669	025341	74	974659	37
24	521349	598	478651	546735	672	453265	025386	74	974614	36
25	521707	598	478293	547138	671	452862	025430	74	974570	35
26	522066	597	477934	547540	671	452460	025475	74	974525	34
27	522424	596	477576	547943	670	452057	025519	74	974481	33
28	522781	596	477219	548345	670	451655	025564	74	974436	32
29	523138	595	476862	548747	669	451253	025609	74	974391	31
30	523495	595	476505	549149	669	450851	025653	75	974347	30
31	9.523852	594	10.476148	9.549550	668	10.450450	10.025698	75	9.974302	29
32	524208	594	475792	549951	668	450049	025743	75	974257	28
33	524564	593	475436	550352	667	449648	025788	75	974212	27
34	524920	593	475080	550752	667	449248	025833	75	974167	26
35	525275	592	474725	551152	666	448848	025878	75	974122	25
36	525630	591	474370	551552	666	448448	025923	75	974077	24
37	525984	591	474016	551952	665	448048	025968	75	974032	23
38	526339	590	473661	552351	665	447649	026013	75	973987	22
39	526693	590	473307	552750	665	447250	026058	75	973942	21
40	527046	589	472954	553149	664	446851	026103	75	973897	20
41	9.527400	589	10.472600	9.553548	664	10.446452	10.026148	75	9.973852	19
42	527753	588	472247	553946	663	446054	026193	75	973807	18
43	528105	588	471895	554344	663	445656	026239	75	973761	17
44	528458	587	471542	554741	662	445259	026284	76	973716	16
45	528810	587	471190	555139	662	444861	026329	76	973671	15
46	529161	586	470839	555536	661	444464	026375	76	973625	14
47	529513	586	470487	555933	661	444067	026420	76	973580	13
48	529864	585	470136	556329	660	443671	026465	76	973535	12
49	530215	585	469785	556725	660	443275	026511	76	973489	11
50	530565	584	469435	557121	659	442879	026556	76	973444	10
51	9.530915	584	10.469085	9.557517	659	10.442483	10.026602	76	9.973398	9
52	531265	583	468735	557913	659	442087	026648	76	973352	8
53	531614	582	468386	558308	658	441692	026693	76	973307	7
54	531963	582	468037	558702	658	441298	026739	76	973261	6
55	532312	581	467688	559097	657	440903	026785	76	973215	5
56	532661	581	467339	559491	657	440509	026831	76	973169	4
57	533009	580	466991	559885	656	440115	026876	76	973124	3
58	533357	580	466643	560279	656	439721	026922	76	973078	2
59	533704	579	466296	560673	655	439327	026968	77	973032	1
60	534052	578	465948	561066	655	438934	027014	77	972986	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.534052	578	10.465948	9.561066	655	10.438934	10.027014	77	9.972986	60
1	534399	577	465601	561459	654	438541	027060	77	972940	59
2	534745	577	465255	561851	654	438149	027106	77	972894	58
3	535092	577	464908	562244	653	437756	027152	77	972848	57
4	535438	576	464562	562636	653	437364	027198	77	972802	56
5	535783	576	464217	563028	653	436972	027245	77	972755	55
6	536129	575	463871	563419	652	436581	027291	77	972709	54
7	536474	574	463526	563811	652	436189	027337	77	972663	53
8	536818	574	463182	564202	651	435798	027383	77	972617	52
9	537163	573	462837	564592	651	435408	027430	77	972570	51
10	537507	573	462493	564983	650	435017	027476	77	972524	50
11	9.537851	572	10.462149	9.565373	650	10.434627	10.027522	77	9.972478	49
12	538194	572	461806	565763	649	434237	027569	78	972431	48
13	538538	571	461462	566153	649	433847	027615	78	972385	47
14	538880	571	461120	566542	649	433458	027662	78	972338	46
15	539223	570	460777	566932	648	433068	027709	78	972291	45
16	539565	570	460435	567320	648	432680	027755	78	972245	44
17	539907	569	460093	567709	647	432291	027802	78	972198	43
18	540249	569	459751	568098	647	431902	027849	78	972151	42
19	540590	568	459410	568486	646	431514	027895	78	972105	41
20	540931	568	459069	568873	646	431127	027942	78	972058	40
21	9.541272	567	10.458728	9.569261	645	10.430739	10.027989	78	9.972011	39
22	541613	567	458387	569648	645	430352	028036	78	971964	38
23	541953	566	458047	570035	645	429965	028083	78	971917	37
24	542293	566	457707	570422	644	429578	028130	78	971870	36
25	542632	565	457368	570809	644	429191	028177	78	971823	35
26	542971	565	457029	571195	643	428805	028224	78	971776	34
27	543310	564	456690	571581	643	428419	028271	79	971729	33
28	543649	564	456351	571967	642	428033	028318	79	971682	32
29	543987	563	456013	572352	642	427648	028365	79	971635	31
30	544325	563	455675	572738	642	427262	028412	79	971588	30
31	9.544663	562	10.455337	9.573123	641	10.426877	10.028460	79	9.971540	29
32	545000	562	455000	573507	641	426493	028507	79	971493	28
33	545338	561	454662	573892	640	426108	028554	79	971446	27
34	545674	561	454326	574276	640	425724	028602	79	971398	26
35	546011	560	453989	574660	639	425340	028649	79	971351	25
36	546347	560	453653	575044	639	424956	028697	79	971303	24
37	546683	559	453317	575427	639	424573	028744	79	971256	23
38	547019	559	452981	575810	638	424190	028792	79	971208	22
39	547354	558	452646	576193	638	423807	028839	79	971161	21
40	547689	558	452311	576576	637	423424	028887	79	971113	20
41	9.548024	557	10.451976	9.576958	637	10.423042	10.028934	80	9.971066	19
42	548359	557	451641	577341	636	422659	028982	80	971018	18
43	548693	556	451307	577723	636	422277	029030	80	970970	17
44	549027	556	450973	578104	636	421896	029078	80	970922	16
45	549360	555	450640	578486	635	421514	029126	80	970874	15
46	549693	555	450307	578867	635	421133	029173	80	970827	14
47	550026	554	449974	579248	634	420752	029221	80	970779	13
48	550359	554	449641	579629	634	420371	029269	80	970731	12
49	550692	553	449308	580009	634	419991	029317	80	970683	11
50	551024	553	448976	580389	633	419611	029365	80	970635	10
51	9.551356	552	10.448644	9.580769	633	10.419231	10.029414	80	9.970586	9
52	551687	552	448313	581149	632	418851	029462	80	970538	8
53	552018	552	447982	581528	632	418472	029510	80	970490	7
54	552349	551	447651	581907	632	418093	029558	80	970442	6
55	552680	551	447320	582286	631	417714	029606	80	970394	5
56	553010	550	446990	582665	631	417335	029655	81	970345	4
57	553341	550	446659	583043	630	416957	029703	81	970297	3
58	553670	549	446330	583422	630	416578	029751	81	970249	2
59	554000	549	446000	583800	629	416200	029800	81	970200	1
60	554329	548	445671	584177	629	415823	029848	81	970152	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.554329	548	10.445671	9.584177	629	10.415823	10.029848	81	9.970152	60
1	554658	548	445342	584555	629	415445	029897	81	970103	59
2	554987	547	445013	584932	628	415068	029945	81	970055	58
3	555315	547	444685	585309	628	414691	029994	81	970006	57
4	555643	546	444357	585686	627	414314	030043	81	969957	56
5	555971	546	444029	586062	627	413938	030091	81	969909	55
6	556299	545	443701	586439	627	413561	030140	81	969860	54
7	556626	545	443374	586815	626	413185	030189	81	969811	53
8	556953	544	443047	587190	626	412810	030238	81	969762	52
9	557280	544	442720	587566	625	412434	030286	81	969714	51
10	557606	543	442394	587941	625	412059	030335	81	969665	50
11	9.557932	543	10.442068	9.588316	625	10.411684	10.030384	82	9.969616	49
12	558258	543	441742	588691	624	411309	030433	82	969567	48
13	558583	542	441417	589066	624	410934	030482	82	969518	47
14	558909	542	441091	589440	623	410560	030531	82	969469	46
15	559234	541	440766	589814	623	410186	030580	82	969420	45
16	559558	541	440442	590188	623	409812	030630	82	969370	44
17	559883	540	440117	590562	622	409438	030679	82	969321	43
18	560207	540	439793	590935	622	409065	030728	82	969272	42
19	560531	539	439469	591308	622	408692	030777	82	969223	41
20	560855	539	439145	591681	621	408319	030827	82	969173	40
21	9.561178	538	10.438822	9.592054	621	10.407946	10.030876	82	9.969124	39
22	561501	538	438499	592426	620	407574	030925	82	969075	38
23	561824	537	438176	592798	620	407202	030975	82	969025	37
24	562146	537	437854	593170	619	406830	031024	82	968976	36
25	562468	536	437532	593542	619	406458	031074	83	968926	35
26	562790	536	437210	593914	618	406086	031123	83	968877	34
27	563112	536	436888	594285	618	405715	031173	83	968827	33
28	563433	535	436567	594656	618	405344	031223	83	968777	32
29	563755	535	436245	595027	617	404973	031272	83	968728	31
30	564075	534	435925	595398	617	404602	031322	83	968678	30
31	9.564396	534	10.435604	9.595768	617	10.404232	10.031372	83	9.968628	29
32	564716	533	435284	596138	616	403862	031422	83	968578	28
33	565036	533	434964	596508	616	403492	031472	83	968528	27
34	565356	532	434644	596878	616	403122	031521	83	968479	26
35	565676	532	434324	597247	615	402753	031571	83	968429	25
36	565995	531	434005	597616	615	402384	031621	83	968379	24
37	566314	531	433686	597985	615	402015	031671	83	968329	23
38	566632	531	433368	598354	614	401646	031722	83	968278	22
39	566951	530	433049	598722	614	401278	031772	84	968228	21
40	567269	530	432731	599091	613	400909	031822	84	968178	20
41	9.567587	529	10.432413	9.599459	613	10.400541	10.031872	84	9.968128	19
42	567904	529	432096	599827	613	400173	031922	84	968078	18
43	568222	528	431778	600194	612	399806	031973	84	968027	17
44	568539	528	431461	600562	612	399438	032023	84	967977	16
45	568856	528	431144	600929	611	399071	032073	84	967927	15
46	569172	527	430828	601296	611	398704	032124	84	967876	14
47	569488	527	430512	601662	611	398338	032174	84	967826	13
48	569804	526	430196	602029	610	397971	032225	84	967775	12
49	570120	526	429880	602395	610	397605	032275	84	967725	11
50	570435	525	429565	602761	610	397239	032326	84	967674	10
51	9.570751	525	10.429249	9.603127	609	10.396873	10.032376	84	9.967624	9
52	571066	524	428934	603493	609	396507	032427	84	967573	8
53	571380	524	428620	603858	609	396142	032478	85	967522	7
54	571695	523	428305	604223	608	395777	032529	85	967471	6
55	572009	523	427991	604588	608	395412	032579	85	967421	5
56	572323	523	427677	604953	607	395047	032630	85	967370	4
57	572636	522	427364	605317	607	394683	032681	85	967319	3
58	572950	522	427050	605682	607	394318	032732	85	967268	2
59	573263	521	426737	606046	606	393954	032783	85	967217	1
60	573575	521	426425	606410	606	393590	032834	85	967166	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
521	10.426425	9.606410	606	10.393590	10.032834	85	9.967166	60
520	426112	606773	606	393227	032885	85	967115	59
520	425800	607137	605	392863	032936	85	967064	58
519	425488	607500	605	392500	032987	85	967013	57
519	425176	607863	604	392137	033039	85	966961	56
519	424864	608225	604	391775	033090	85	966910	55
518	424553	608588	604	391412	033141	85	966859	54
518	424242	608950	603	391050	033192	85	966808	53
517	423931	609312	603	390688	033244	86	966756	52
517	423621	609674	603	390326	033295	86	966705	51
516	423311	610036	602	389964	033347	86	966653	50
516	10.423001	9.610397	602	10.389603	10.033398	86	9.966602	49
516	422691	610759	602	389241	033450	86	966550	48
515	422382	611120	601	388880	033501	86	966499	47
515	422073	611480	601	388520	033553	86	966447	46
514	421764	611841	601	388159	033605	86	966395	45
514	421455	612201	600	387799	033656	86	966344	44
513	421147	612561	600	387439	033708	86	966292	43
513	420838	612921	600	387079	033760	86	966240	42
513	420530	613281	599	386719	033812	86	966188	41
512	420223	613641	599	386359	033864	86	966136	40
512	10.419915	9.614000	598	10.386000	10.033915	87	9.966085	39
511	419608	614359	598	385641	033967	87	966033	38
511	419301	614718	598	385282	034019	87	965981	37
511	418995	615077	597	384923	034072	87	965928	36
510	418688	615435	597	384565	034124	87	965876	35
510	418382	615793	597	384207	034176	87	965824	34
509	418076	616151	596	383849	034228	87	965772	33
509	417771	616509	596	383491	034280	87	965720	32
509	417465	616867	596	383133	034332	87	965668	31
508	417160	617224	595	382776	034385	87	965615	30
508	10.416855	9.617582	595	10.382418	10.034437	87	9.965563	29
507	416551	617939	595	382061	034489	87	965511	28
507	416246	618295	594	381705	034542	87	965458	27
506	415942	618652	594	381348	034594	87	965406	26
506	415639	619008	594	380992	034647	88	965353	25
506	415335	619364	593	380636	034699	88	965301	24
505	415032	619721	593	380279	034752	88	965248	23
505	414728	620076	593	379924	034805	88	965195	22
504	414426	620432	592	379568	034857	88	965143	21
504	414123	620787	592	379213	034910	88	965090	20
503	10.413821	9.621142	592	10.378858	10.034963	88	9.965037	19
503	413518	621497	591	378503	035016	88	964984	18
503	413217	621852	591	378148	035069	88	964931	17
502	412915	622207	590	377793	035121	88	964879	16
502	412614	622561	590	377439	035174	88	964826	15
501	412312	622915	590	377085	035227	88	964773	14
501	412011	623269	589	376731	035280	88	964720	13
501	411711	623623	589	376377	035334	89	964666	12
500	411410	623976	589	376024	035387	89	964613	11
500	411110	624330	588	375670	035440	89	964560	10
499	10.410810	9.624683	588	10.375317	10.035493	89	9.964507	9
499	410511	625036	588	374964	035546	89	964454	8
499	410211	625388	587	374612	035600	89	964400	7
498	409912	625741	587	374259	035653	89	964347	6
498	409613	626093	587	373907	035706	89	964294	5
497	409314	626445	586	373555	035760	89	964240	4
497	409016	626797	586	373203	035813	89	964187	3
497	408718	627149	586	372851	035867	89	964133	2
496	408420	627501	585	372499	035920	89	964080	1
496	408122	627852	585	372148	035974	89	964026	0
	Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

TABLE III.—Logarithmic Sines, Tangents, and Secants.

	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	
	9.591878	496	10.408122	9.627852	585	10.372148	10.035974	89	
	592176	495	407824	628203	585	371797	036028	89	
	592473	495	407527	628554	585	371446	036081	89	
	592770	495	407230	628905	584	371095	036135	90	
	593067	494	406933	629255	584	370745	036189	90	
	593363	494	406637	629606	583	370394	036243	90	
	593659	493	406341	629956	583	370044	036296	90	
	593955	493	406045	630306	583	369694	036350	90	
	594251	493	405749	630656	583	369344	036404	90	
	594547	492	405453	631005	582	368995	036458	90	
	594842	492	405158	631355	582	368645	036512	90	
1	9.595137	491	10.404863	9.631704	582	10.368296	10.036566	90	
2	595432	491	404568	632053	581	367947	036621	90	
3	595727	491	404273	632401	581	367599	036675	90	
4	596021	490	403979	632750	581	367250	036729	90	
5	596315	490	403685	633098	580	366902	036783	90	
6	596609	489	403391	633447	580	366553	036837	90	
7	596903	489	403097	633795	580	366205	036892	91	
8	597196	489	402804	634143	579	365857	036946	91	
9	597490	488	402510	634490	579	365510	037001	91	
0	597783	488	402217	634838	579	365162	037055	91	
1	9.598075	487	10.401925	9.635185	578	10.364815	10.037110	91	
2	598368	487	401632	635532	578	364468	037164	91	
3	598660	487	401340	635879	578	364121	037219	91	
4	598952	486	401048	636226	577	363774	037273	91	
5	599244	486	400756	636572	577	363428	037328	91	
6	599536	485	400464	636919	577	363081	037383	91	
7	599827	485	400173	637265	577	362735	037438	91	
8	600118	485	399882	637611	576	362389	037492	91	
9	600409	484	399591	637956	576	362044	037547	91	
0	600700	484	399300	638302	576	361698	037602	92	
1	9.600990	484	10.399010	9.638647	575	10.361353	10.037657	92	
2	601280	483	398720	638992	575	361008	037712	92	
3	601570	483	398430	639337	575	360663	037767	92	
4	601860	482	398140	639682	574	360318	037822	92	
5	602150	482	397850	640027	574	359973	037877	92	
6	602439	482	397561	640371	574	359629	037933	92	
7	602728	481	397272	640716	573	359284	037988	92	
8	603017	481	396983	641060	573	358940	038043	92	
9	603305	481	396695	641404	573	358596	038098	92	
0	603594	480	396406	641747	572	358253	038154	92	
1	9.603882	480	10.396118	9.642091	572	10.357909	10.038209	92	
2	604170	479	395830	642434	572	357566	038265	92	
3	604457	479	395543	642777	572	357223	038320	92	
4	604745	479	395255	643120	571	356880	038376	93	
5	605032	478	394968	643463	571	356537	038431	93	
6	605319	478	394681	643806	571	356194	038487	93	
7	605606	478	394394	644148	570	355852	038542	93	
8	605892	477	394108	644490	570	355510	038598	93	
9	606179	477	393821	644832	570	355168	038654	93	
0	606465	476	393535	645174	569	354826	038710	93	
1	9.606751	476	10.393249	9.645516	569	10.354484	10.038765	93	
2	607036	476	392964	645857	569	354143	038821	93	
3	607322	475	392678	646199	569	353801	038877	93	
4	607607	475	392393	646540	568	353460	038933	93	
5	607892	474	392108	646881	568	353119	038989	93	
6	608177	474	391823	647222	568	352778	039045	93	
7	608461	474	391539	647562	567	352438	039101	93	
8	608745	473	391255	647903	567	352097	039157	94	
9	609029	473	390971	648243	567	351757	039214	94	
)	*609313*	*473*	390687	648583	566	351417	039270	94	
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine. M.

D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
73	10.390687	9.648583	566	10.351417	10.039270	94	9.960730	60
72	390403	648923	566	351077	039326	94	960674	59
72	390120	649263	566	350737	039382	94	960618	58
72	389836	649602	566	350398	039439	94	960561	57
71	389553	649942	565	350058	039495	94	960505	56
71	389271	650281	565	349719	039552	94	960448	55
70	388988	650620	565	349380	039608	94	960392	54
70	388706	650959	564	349041	039665	94	960335	53
70	388424	651297	564	348703	039721	94	960279	52
69	388142	651636	564	348364	039778	94	960222	51
69	387860	651974	563	348026	039835	94	960165	50
69	10.387579	9.652312	563	10.347688	10.039891	95	9.960109	49
68	387298	652650	563	347350	039948	95	960052	48
68	387017	652988	563	347012	040005	95	959995	47
67	386736	653326	562	346674	040062	95	959938	46
67	386455	653663	562	346337	040118	95	959882	45
67	386175	654000	562	346000	040175	95	959825	44
66	385895	654337	561	345663	040232	95	959768	43
66	385615	654674	561	345326	040289	95	959711	42
66	385335	655011	561	344989	040346	95	959654	41
65	385056	655348	561	344652	040404	95	959596	40
65	10.384777	9.655684	560	10.344316	10.040461	95	9.959539	39
65	384498	656020	560	343980	040518	95	959482	38
64	384219	656356	560	343644	040575	95	959425	37
64	383940	656692	559	343308	040632	95	959368	36
64	383662	657028	559	342972	040690	96	959310	35
63	383384	657364	559	342636	040747	96	959253	34
63	383106	657699	559	342301	040805	96	959195	33
62	382828	658034	558	341966	040862	96	959138	32
62	382550	658369	558	341631	040919	96	959081	31
62	382273	658704	558	341296	040977	96	959023	30
61	10.381996	9.659039	558	10.340961	10.041035	96	9.958965	29
61	381719	659373	557	340627	041092	96	958908	28
61	381442	659708	557	340292	041150	96	958850	27
60	381166	660042	557	339958	041208	96	958792	26
60	380890	660376	557	339624	041266	96	958734	25
60	380614	660710	556	339290	041323	96	958677	24
59	380338	661043	556	338957	041381	96	958619	23
59	380062	661377	556	338623	041439	96	958561	22
59	379787	661710	555	338290	041497	97	958503	21
58	379512	662043	555	337957	041555	97	958445	20
58	10.379237	9.662376	555	10.337624	10.041613	97	9.958387	19
57	378962	662709	554	337291	041671	97	958329	18
57	378687	663042	554	336958	041729	97	958271	17
57	378413	663375	554	336625	041787	97	958213	16
56	378139	663707	554	336293	041846	97	958154	15
56	377865	664039	553	335961	041904	97	958096	14
56	377591	664371	553	335629	041962	97	958038	13
55	377318	664703	553	335297	042021	97	957979	12
55	377044	665035	553	334965	042079	97	957921	11
55	376771	665366	552	334634	042137	97	957863	10
54	10.376498	9.665697	552	10.334303	10.042196	97	9.957804	9
54	376226	666029	552	333971	042254	98	957746	8
54	375953	666360	551	333640	042313	98	957687	7
53	375681	666691	551	333309	042372	98	957628	6
53	375409	667021	551	332979	042430	98	957570	5
53	375137	667352	551	332648	042489	98	957511	4
52	374865	667682	550	332318	042548	98	957452	3
52	374594	668013	550	331987	042607	98	957393	2
52	374323	668343	550	331657	042665	98	957335	1
51	374052	668672	550	331328	042724	98	957276	0
	Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.625948	451	10.374052	9.668673	550	10.331327	10.042724	98	9.957276	60
1	626219	451	373781	669002	549	330998	042783	98	957217	59
2	626490	451	373510	669332	549	330668	042842	98	957158	58
3	626760	450	373240	669661	549	330339	042901	98	957099	57
4	627030	450	372970	669991	548	330009	042960	98	957040	56
5	627300	450	372700	670320	548	329680	043019	98	956981	55
6	627570	449	372430	670649	548	329351	043079	99	956921	54
7	627840	449	372160	670977	548	329023	043138	99	956862	53
8	628109	449	371891	671306	547	328694	043197	99	956803	52
9	628378	448	371622	671634	547	328366	043256	99	956744	51
10	628647	448	371353	671963	547	328037	043316	99	956684	50
11	9.628916	448	10.371084	9.672291	547	10.327709	10.043375	99	9.956625	49
12	629185	447	370815	672619	546	327381	043434	99	956566	48
13	629453	447	370547	672947	546	327053	043494	99	956506	47
14	629721	447	370279	673274	546	326726	043553	99	956447	46
15	629989	446	370011	673602	546	326398	043613	99	956387	45
16	630257	446	369743	673929	545	326071	043673	99	956327	44
17	630524	446	369476	674257	545	325743	043732	99	956268	43
18	630792	445	369208	674584	545	325416	043792	100	956208	42
19	631059	445	368941	674910	544	325090	043852	100	956148	41
20	631326	445	368674	675237	544	324763	043911	100	956089	40
21	9.631593	444	10.368407	9.675564	544	10.324436	10.043971	100	9.956029	39
22	631859	444	368141	675890	544	324110	044031	100	955969	38
23	632125	444	367875	676216	543	323784	044091	100	955909	37
24	632392	443	367608	676543	543	323457	044151	100	955849	36
25	632658	443	367342	676869	543	323131	044211	100	955789	35
26	632923	443	367077	677194	543	322806	044271	100	955729	34
27	633189	442	366811	677520	542	322480	044331	100	955669	33
28	633454	442	366546	677846	542	322154	044391	100	955609	32
29	633719	442	366281	678171	542	321829	044452	100	955548	31
30	633984	441	366016	678496	542	321504	044512	100	955488	30
31	9.634249	441	10.365751	9.678821	541	10.321179	10.044572	101	9.955428	29
32	634514	440	365486	679146	541	320854	044632	101	955368	28
33	634778	440	365222	679471	541	320529	044693	101	955307	27
34	635042	440	364958	679795	541	320205	044753	101	955247	26
35	635306	439	364694	680120	540	319880	044814	101	955186	25
36	635570	439	364430	680444	540	319556	044874	101	955126	24
37	635834	439	364166	680768	540	319232	044935	101	955065	23
38	636097	438	363903	681092	540	318908	044995	101	955005	22
39	636360	438	363640	681416	539	318584	045056	101	954944	21
40	636623	438	363377	681740	539	318260	045117	101	954883	20
41	9.636886	437	10.363114	9.682063	539	10.317937	10.045177	101	9.954823	19
42	637148	437	362852	682387	539	317613	045238	101	954762	18
43	637411	437	362589	682710	538	317290	045299	101	954701	17
44	637673	437	362327	683033	538	316967	045360	101	954640	16
45	637935	436	362065	683356	538	316644	045421	101	954579	15
46	638197	436	361803	683679	538	316321	045482	102	954518	14
47	638458	436	361542	684001	537	315999	045543	102	954457	13
48	638720	435	361280	684324	537	315676	045604	102	954396	12
49	638981	435	361019	684646	537	315354	045665	102	954335	11
50	639242	435	360758	684968	537	315032	045726	102	954274	10
51	9.639503	434	10.360497	9.685290	536	10.314710	10.045787	102	9.954213	9
52	639764	434	360236	685612	536	314388	045848	102	954152	8
53	640024	434	359976	685934	536	314066	045910	102	954090	7
54	640284	433	359716	686255	536	313745	045971	102	954029	6
55	640544	433	359456	686577	535	313423	046032	102	953968	5
56	640804	433	359196	686898	535	313102	046094	102	953906	4
57	641064	432	358936	687219	535	312781	046155	102	953845	3
58	641324	432	358676	687540	535	312460	046217	102	953783	2
59	641583	432	358417	687861	534	312139	046278	103	953722	1
60	641842	431	358158	688182	534	311818	046340	103	953660	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.641842	431	10.358158	9.688182	534	10.311818	10.046340	103	9.953660	60
1	642101	431	357899	688502	534	311498	046401	103	953599	59
2	642360	431	357640	688823	534	311177	046463	103	953537	58
3	642618	430	357382	689143	533	310857	046525	103	953475	57
4	642877	430	357123	689463	533	310537	046587	103	953413	56
5	643135	430	356865	689783	533	310217	046648	103	953352	55
6	643393	430	356607	690103	533	309897	046710	103	953290	54
7	643650	429	356350	690423	533	309577	046772	103	953228	53
8	643908	429	356092	690742	532	309258	046834	103	953166	52
9	644165	429	355835	691062	532	308938	046896	103	953104	51
10	644423	428	355577	691381	532	308619	046958	103	953042	50
11	9.644680	428	10.355320	9.691700	532	10.308300	10.047020	104	9.952980	49
12	644936	428	355064	692019	531	307981	047082	104	952918	48
13	645193	427	354807	692338	531	307662	047145	104	952855	47
14	645450	427	354550	692656	531	307344	047207	104	952793	46
15	645706	427	354294	692975	531	307025	047269	104	952731	45
16	645962	426	354038	693293	530	306707	047331	104	952669	44
17	646218	426	353782	693612	530	306388	047394	104	952606	43
18	646474	426	353526	693930	530	306070	047456	104	952544	42
19	646729	425	353271	694248	530	305752	047519	104	952481	41
20	646984	425	353016	694566	529	305434	047581	104	952419	40
21	9.647240	425	10.352760	9.694883	529	10.305117	10.047644	104	9.952356	39
22	647494	424	352506	695201	529	304799	047706	104	952294	38
23	647749	424	352251	695518	529	304482	047769	104	952231	37
24	648004	424	351996	695836	529	304164	047832	105	952168	36
25	648258	424	351742	696153	528	303847	047894	105	952106	35
26	648512	423	351488	696470	528	303530	047957	105	952043	34
27	648766	423	351234	696787	528	303213	048020	105	951980	33
28	649020	423	350980	697103	528	302897	048083	105	951917	32
29	649274	422	350726	697420	527	302580	048146	105	951854	31
30	649527	422	350473	697736	527	302264	048209	105	951791	30
31	9.649781	422	10.350219	9.698053	527	10.301947	10.048272	105	9.951728	29
32	650034	422	349966	698369	527	301631	048335	105	951665	28
33	650287	421	349713	698685	526	301315	048398	105	951602	27
34	650539	421	349461	699001	526	300999	048461	105	951539	26
35	650792	421	349208	699316	526	300684	048524	105	951476	25
36	651044	420	348956	699632	526	330368	048588	105	951412	24
37	651297	420	348703	699947	526	300053	048651	106	951349	23
38	651549	420	348451	700263	525	299737	048714	106	951286	22
39	651800	419	348200	700578	525	299422	048778	106	951222	21
40	652052	419	347948	700893	525	299107	048841	106	951159	20
41	9.652304	419	10.347696	9.701208	525	10.298792	10.048904	106	9.951096	19
42	652555	418	347445	701523	524	298477	048968	106	951032	18
43	652806	418	347194	701837	524	298163	049032	106	950968	17
44	653057	418	346943	702152	524	297848	049095	106	950905	16
45	653308	418	346692	702466	524	297534	049159	106	950841	15
46	653558	417	346442	702780	523	297220	049222	106	950778	14
47	653808	417	346192	703095	523	296905	049286	106	950714	13
48	654059	417	345941	703409	523	296591	049350	106	950650	12
49	654309	416	345691	703723	523	296277	049414	106	950586	11
50	654558	416	345442	704036	522	295964	049478	107	950522	10
51	9.654808	416	10.345192	9.704350	522	10.295650	10.049542	107	9.950458	9
52	655058	416	344942	704663	522	295337	049606	107	950394	8
53	655307	415	344693	704977	522	295023	049670	107	950330	7
54	655556	415	344444	705290	522	294710	049734	107	950266	6
55	655805	415	344195	705603	522	294397	049798	107	950202	5
56	656054	414	343946	705916	521	294084	049862	107	950138	4
57	656302	414	343698	706228	521	293772	049926	107	950074	3
58	656551	414	343449	706541	521	293459	049990	107	950010	2
59	656799	413	343201	706854	521	293146	050055	107	949945	1
60	657047	413	342953	707166	520	292834	050119	107	949881	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.685571	380	10.314429	9.743752	496	10.256248	10.058181	117	9.941819	60
1	685799	379	314201	744050	496	255950	058251	117	941749	59
2	686027	379	313973	744348	496	255652	058321	117	941679	58
3	686254	379	313746	744645	496	255355	058391	117	941609	57
4	686482	379	313518	744943	496	255057	058461	117	941539	56
5	686709	378	313291	745240	496	254760	058531	117	941469	55
6	686936	378	313064	745538	495	254462	058602	117	941398	54
7	687163	378	312837	745835	495	254165	058672	117	941328	53
8	687389	378	312611	746132	495	253868	058742	117	941258	52
9	687616	377	312384	746429	495	253571	058813	117	941187	51
10	687843	377	312157	746726	495	253274	058883	117	941117	50
11	9.688069	377	10.311931	9.747023	494	10.252977	10.058954	118	9.941046	49
12	688295	377	311705	747319	494	252681	059025	118	940975	48
13	688521	376	311479	747616	494	252384	059095	118	940905	47
14	688747	376	311253	747913	494	252087	059166	118	940834	46
15	688972	376	311028	748209	494	251791	059237	118	940763	45
16	689198	376	310802	748505	493	251495	059307	118	940693	44
17	689423	375	310577	748801	493	251199	059378	118	940622	43
18	689648	375	310352	749097	493	250903	059449	118	940551	42
19	689873	375	310127	749393	493	250607	059520	118	940480	41
20	690098	375	309902	749689	493	250311	059591	118	940409	40
21	9.690323	374	10.309677	9.749985	493	10.250015	10.059662	118	9.940338	39
22	690548	374	309452	750281	492	249719	059733	118	940267	38
23	690772	374	309228	750576	492	249424	059804	118	940196	37
24	690996	374	309004	750872	492	249128	059875	119	940125	36
25	691220	373	308780	751167	492	248833	059946	119	940054	35
26	691444	373	308556	751462	492	248538	060018	119	939982	34
27	691668	373	308332	751757	492	248243	060089	119	939911	33
28	691892	373	308108	752052	491	247948	060160	119	939840	32
29	692115	372	307885	752347	491	247653	060232	119	939768	31
30	692339	372	307661	752642	491	247358	060303	119	939697	30
31	9.692562	372	10.307438	9.752937	491	10.247063	10.060375	119	9.939625	29
32	692785	371	307215	753231	491	246769	060446	119	939554	28
33	693008	371	306992	753526	491	246474	060518	119	939482	27
34	693231	371	306769	753820	490	246180	060590	119	939410	26
35	693453	371	306547	754115	490	245885	060661	119	939339	25
36	693676	370	306324	754409	490	245591	060733	120	939267	24
37	693898	370	306102	754703	490	245297	060805	120	939195	23
38	694120	370	305880	754997	490	245003	060877	120	939123	22
39	694342	370	305658	755291	490	244709	060948	120	939052	21
40	694564	369	305436	755585	489	244415	061020	120	938980	20
41	9.694786	369	10.305214	9.755878	489	10.244122	10.061092	120	9.938908	19
42	695007	369	304993	756172	489	243828	061164	120	938836	18
43	695229	369	304771	756465	489	243535	061237	120	938763	17
44	695450	368	304550	756759	489	243241	061309	120	938691	16
45	695671	368	304329	757052	489	242948	061381	120	938619	15
46	695892	368	304108	757345	488	242655	061453	120	938547	14
47	696113	368	303887	757638	488	242362	061525	120	938475	13
48	696334	367	303666	757931	488	242069	061598	121	938402	12
49	696554	367	303446	758224	488	241776	061670	121	938330	11
50	696775	367	303225	758517	488	241483	061742	121	938258	10
51	9.696995	367	10.303005	9.758810	488	10.241190	10.061815	121	9.938185	9
52	697215	366	302785	759102	487	240898	061887	121	938113	8
53	697435	366	302565	759395	487	240605	061960	121	938040	7
54	697654	366	302346	759687	487	240313	062033	121	937967	6
55	697874	366	302126	759979	487	240021	062105	121	937895	5
56	698094	365	301906	760272	487	239728	062178	121	937822	4
57	698313	365	301687	760564	487	239436	062251	121	937749	3
58	698532	365	301468	760856	486	239144	062324	121	937676	2
59	698751	365	301249	761148	486	238852	062396	121	937604	1
60	*698970*	*364*	301030	761439	486	238561	062469	121	937531	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.698970	364	10.301030	9.761439	486	10.238561	10.062469	121	9.937531	60
1	699189	364	300811	761731	486	238269	062542	122	937458	59
2	699407	364	300593	762023	486	237977	062615	122	937385	58
3	699626	364	300374	762314	486	237686	062688	122	937312	57
4	699844	363	300156	762606	485	237394	062762	122	937238	56
5	700062	363	299938	762897	485	237103	062835	122	937165	55
6	700280	363	299720	763188	485	236812	062908	122	937092	54
7	700498	363	299502	763479	485	236521	062981	122	937019	53
8	700716	363	299284	763770	485	236230	063054	122	936946	52
9	700933	362	299067	764061	485	235939	063128	122	936872	51
10	701151	362	298849	764352	485	235648	063201	122	936799	50
11	9.701368	362	10.298632	9.764643	484	10.235357	10.063275	122	9.936725	49
12	701585	362	298415	764933	484	235067	063348	123	936652	48
13	701802	361	298198	765224	484	234776	063422	123	936578	47
14	702019	361	297981	765514	484	234486	063495	123	936505	46
15	702236	361	297764	765805	484	234195	063569	123	936431	45
16	702452	361	297548	766095	484	233905	063643	123	936357	44
17	702669	360	297331	766385	483	233615	063716	123	936284	43
18	702885	360	297115	766675	483	233325	063790	123	936210	42
19	703101	360	296899	766965	483	233035	063864	123	936136	41
20	703317	360	296683	767255	483	232745	063938	123	936062	40
21	9.703533	359	10.296467	9.767545	483	10.232455	10.064012	123	9.935988	39
22	703749	359	296251	767834	483	232166	064086	123	935914	38
23	703964	359	296036	768124	482	231876	064160	123	935840	37
24	704179	359	295821	768413	482	231587	064234	124	935766	36
25	704395	359	295605	768703	482	231297	064308	124	935692	35
26	704610	358	295390	768992	482	231008	064382	124	935618	34
27	704825	358	295175	769281	482	230719	064457	124	935543	33
28	705040	358	294960	769570	482	230430	064531	124	935469	32
29	705254	358	294746	769860	481	230140	064605	124	935395	31
30	705469	357	294531	770148	481	229852	064680	124	935320	30
31	9.705683	357	10.294317	9.770437	481	10.229563	10.064754	124	9.935246	29
32	705898	357	294102	770726	481	229274	064829	124	935171	28
33	706112	357	293888	771015	481	228985	064903	124	935097	27
34	706326	356	293674	771303	481	228697	064978	124	935022	26
35	706539	356	293461	771592	481	228408	065052	124	934948	25
36	706753	356	293247	771880	480	228120	065127	124	934873	24
37	706967	356	293033	772168	480	227832	065202	125	934798	23
38	707180	355	292820	772457	480	227543	065277	125	934723	22
39	707393	355	292607	772745	480	227255	065351	125	934649	21
40	707606	355	292394	773033	480	226967	065426	125	934574	20
41	9.707819	355	10.292181	9.773321	480	10.226679	10.065501	125	9.934499	19
42	708032	354	291968	773608	480	226392	065576	125	934424	18
43	708245	354	291755	773896	479	226104	065651	125	934349	17
44	708458	354	291542	774184	479	225816	065726	125	934274	16
45	708670	354	291330	774471	479	225529	065801	125	934199	15
46	708882	353	291118	774759	479	225241	065877	125	934123	14
47	709094	353	290906	775046	479	224954	065952	125	934048	13
48	709306	353	290694	775333	479	224667	066027	125	933973	12
49	709518	353	290482	775621	478	224379	066102	126	933898	11
50	709730	353	290270	775908	478	224092	066178	126	933822	10
51	9.709941	352	10.290059	9.776195	478	10.223805	10.066253	126	9.933747	9
52	710153	352	289847	776482	478	223518	066329	126	933671	8
53	710364	352	289636	776769	478	223231	066404	126	933596	7
54	710575	352	289425	777055	478	222945	066480	126	933520	6
55	710786	351	289214	777342	478	222658	066555	126	933445	5
56	710997	351	289003	777628	477	222372	066631	126	933369	4
57	711208	351	288792	777915	477	222085	066707	126	933293	3
58	711419	351	288581	778201	477	221799	066783	126	933217	2
59	711629	350	288371	778488	477	221512	066859	126	933141	1
60	711839	350	288161	778774	477	221226	066934	126	933066	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.711839	350	10.288161	9.778774	477	10.221226	10.066934	126	9.933066	60
1	712050	350	287950	779060	477	220940	067010	127	932990	59
2	712260	350	287740	779346	477	220654	067086	127	932914	58
3	712469	349	287531	779632	476	220368	067162	127	932838	57
4	712679	349	287321	779918	476	220082	067238	127	932762	56
5	712889	349	287111	780203	476	219797	067315	127	932685	55
6	713098	349	286902	780489	476	219511	067391	127	932609	54
7	713308	349	286692	780775	476	219225	067467	127	932533	53
8	713517	348	286483	781060	476	218940	067543	127	932457	52
9	713726	348	286274	781346	475	218654	067620	127	932380	51
10	713935	348	286065	781631	475	218369	067696	127	932304	50
11	9.714144	348	10.285856	9.781916	475	10.218084	10.067772	127	9.932228	49
12	714352	347	285648	782201	475	217799	067849	127	932151	48
13	714561	347	285439	782486	475	217514	067925	128	932075	47
14	714769	347	285231	782771	475	217229	068002	128	931998	46
15	714978	347	285022	783056	475	216944	068079	128	931921	45
16	715186	347	284814	783341	475	216659	068155	128	931845	44
17	715394	346	284606	783626	474	216374	068232	128	931768	43
18	715602	346	284398	783910	474	216090	068309	128	931691	42
19	715809	346	284191	784195	474	215805	068386	128	931614	41
20	716017	346	283983	784479	474	215521	068463	128	931537	40
21	9.716224	345	10.283776	9.784764	474	10.215236	10.068540	128	9.931460	39
22	716432	345	283568	785048	474	214952	068617	128	931383	38
23	716639	345	283361	785332	473	214668	068694	128	931306	37
24	716846	345	283154	785616	473	214384	068771	129	931229	36
25	717053	345	282947	785900	473	214100	068848	129	931152	35
26	717259	344	282741	786184	473	213816	068925	129	931075	34
27	717466	344	282534	786468	473	213532	069002	129	930998	33
28	717673	344	282327	786752	473	213248	069079	129	930921	32
29	717879	344	282121	787036	473	212964	069157	129	930843	31
30	718085	343	281915	787319	473	212681	069234	129	930766	30
31	9.718291	343	10.281709	9.787603	472	10.212397	10.069312	129	9.930688	29
32	718497	343	281503	787886	472	212114	069389	129	930611	28
33	718703	343	281297	788170	472	211830	069467	129	930533	27
34	718909	343	281091	788453	472	211547	069544	129	930456	26
35	719114	342	280886	788736	472	211264	069622	129	930378	25
36	719320	342	280680	789019	472	210981	069700	130	930300	24
37	719525	342	280475	789302	472	210698	069777	130	930223	23
38	719730	342	280270	789585	471	210415	069855	130	930145	22
39	719935	341	280065	789868	471	210132	069933	130	930067	21
40	720140	341	279860	790151	471	209849	070011	130	929989	20
41	9.720345	341	10.279655	9.790433	471	10.209567	10.070089	130	9.929911	19
42	720549	341	279451	790716	471	209284	070167	130	929833	18
43	720754	340	279246	790999	471	209001	070245	130	929755	17
44	720958	340	279042	791281	471	208719	070323	130	929677	16
45	721162	340	278838	791563	470	208437	070401	130	929599	15
46	721366	340	278634	791846	470	208154	070479	130	929521	14
47	721570	340	278430	792128	470	207872	070558	130	929442	13
48	721774	339	278226	792410	470	207590	070636	131	929364	12
49	721978	339	278022	792692	470	207308	070714	131	929286	11
50	722181	339	277819	792974	470	207026	070793	131	929207	10
51	9.722385	339	10.277615	9.793256	470	10.206744	10.070871	131	9.929129	9
52	722588	339	277412	793538	469	206462	070950	131	929050	8
53	722791	338	277209	793819	469	206181	071028	131	928972	7
54	722994	338	277006	794101	469	205899	071107	131	928893	6
55	723197	338	276803	794383	469	205617	071185	131	928815	5
56	723400	338	276600	794664	469	205336	071264	131	928736	4
57	723603	337	276397	794945	469	205055	071343	131	928657	3
58	723805	337	276195	795227	469	204773	071422	131	928578	2
59	724007	337	275993	795508	468	204492	071501	131	928499	1
60	724210	337	275790	795789	468	204211	071580	131	928420	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.724210	337	10.275790	9.795789	468	10.204211	10.071580	132	9.928420	60
1	724412	337	275588	796070	468	203930	071658	132	928342	59
2	724614	336	275386	796351	468	203649	071737	132	928263	58
3	724816	336	275184	796632	468	203368	071817	132	928183	57
4	725017	336	274983	796913	468	203087	071896	132	928104	56
5	725219	336	274781	797194	468	202806	071975	132	928025	55
6	725420	335	274580	797475	468	202525	072054	132	927946	54
7	725622	335	274378	797755	467	202245	072133	132	927867	53
8	725823	335	274177	798036	467	201964	072213	132	927787	52
9	726024	335	273976	798316	467	201684	072292	132	927708	51
10	726225	335	273775	798596	467	201404	072371	132	927629	50
11	9.726426	334	10.273574	9.798877	467	10.201123	10.072451	132	9.927549	49
12	726626	334	273374	799157	467	200843	072530	133	927470	48
13	726827	334	273173	799437	467	200563	072610	133	927390	47
14	727027	334	272973	799717	467	200283	072690	133	927310	46
15	727228	334	272772	799997	466	200003	072769	133	927231	45
16	727428	333	272572	800277	466	199723	072849	133	927151	44
17	727628	333	272372	800557	466	199443	072929	133	927071	43
18	727828	333	272172	800836	466	199164	073009	133	926991	42
19	728027	333	271973	801116	466	198884	073089	133	926911	41
20	728227	333	271773	801396	466	198604	073169	133	926831	40
21	9.728427	332	10.271573	9.801675	466	10.198325	10.073249	133	9.926751	39
22	728626	332	271374	801955	466	198045	073329	133	926671	38
23	728825	332	271175	802234	465	197766	073409	133	926591	37
24	729024	332	270976	802513	465	197487	073489	134	926511	36
25	729223	331	270777	802792	465	197208	073569	134	926431	35
26	729422	331	270578	803072	465	196928	073649	134	926351	34
27	729621	331	270379	803351	465	196649	073730	134	926270	33
28	729820	331	270180	803630	465	196370	073810	134	926190	32
29	730018	330	269982	803908	465	196092	073890	134	926110	31
30	730217	330	269783	804187	465	195813	073971	134	926029	30
31	9.730415	330	10.269585	9.804466	464	10.195534	10.074051	134	9.925949	29
32	730613	330	269387	804745	464	195255	074132	134	925868	28
33	730811	330	269189	805023	464	194977	074212	134	925788	27
34	731009	329	268991	805302	464	194698	074293	134	925707	26
35	731206	329	268794	805580	464	194420	074374	134	925626	25
36	731404	329	268596	805859	464	194141	074455	135	925545	24
37	731602	329	268398	806137	464	193863	074535	135	925465	23
38	731799	329	268201	806415	463	193585	074616	135	925384	22
39	731996	328	268004	806693	463	193307	074697	135	925303	21
40	732193	328	267807	806971	463	193029	074778	135	925222	20
41	9.732390	328	10.267610	9.807249	463	10.192751	10.074859	135	9.925141	19
42	732587	328	267413	807527	463	192473	074940	135	925060	18
43	732784	328	267216	807805	463	192195	075021	135	924979	17
44	732980	327	267020	808083	463	191917	075103	135	924897	16
45	733177	327	266823	808361	463	191639	075184	135	924816	15
46	733373	327	266627	808638	463	191362	075265	136	924735	14
47	733569	327	266431	808916	462	191084	075346	136	924654	13
48	733765	327	266235	809193	462	190807	075428	136	924572	12
49	733961	326	266039	809471	462	190529	075509	136	924491	11
50	734157	326	265843	809748	462	190252	075591	136	924409	10
51	9.734353	326	10.265647	9.810025	462	10.189975	10.075672	136	9.924328	9
52	734549	326	265451	810302	462	189698	075754	136	924246	8
53	734744	325	265256	810580	462	189420	075836	136	924164	7
54	734939	325	265061	810857	462	189143	075917	136	924083	6
55	735135	325	264865	811134	461	188866	075999	136	924001	5
56	735330	325	264670	811410	461	188590	076081	136	923919	4
57	735525	325	264475	811687	461	188313	076163	136	923837	3
58	735719	324	264281	811964	461	188036	076245	137	923755	2
59	735914	324	264086	812241	461	187759	076327	137	923673	1
60	736109	324	263891	812517	461	187483	076409	137	923591	0
	Cosine.		*Secant.*	*Cotang.*		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.736109	324	10.263891	9.812517	461	10.187483	10.076409	137	9.923591	60
1	736303	324	263697	812794	461	187206	076491	137	923509	59
2	736498	324	263502	813070	461	186930	076573	137	923427	58
3	736692	323	263308	813347	460	186653	076655	137	923345	57
4	736886	323	263114	813623	460	186377	076737	137	923263	56
5	737080	323	262920	813899	460	186101	076819	137	923181	55
6	737274	323	262726	814175	460	185825	076902	137	923098	54
7	737467	323	262533	814452	460	185548	076984	137	923016	53
8	737661	322	262339	814728	460	185272	077067	137	922933	52
9	737855	322	262145	815004	460	184996	077149	137	922851	51
10	738048	322	261952	815279	460	184721	077232	138	922768	50
11	9.738241	322	10.261759	9.815555	460	10.184445	10.077314	138	9.922686	49
12	738434	322	261566	815831	459	184169	077397	138	922603	48
13	738627	321	261373	816107	459	183893	077480	138	922520	47
14	738820	321	261180	816382	459	183618	077562	138	922438	46
15	739013	321	260987	816658	459	183342	077645	138	922355	45
16	739206	321	260794	816933	459	183067	077728	138	922272	44
17	739398	321	260602	817209	459	182791	077811	138	922189	43
18	739590	320	260410	817484	459	182516	077894	138	922106	42
19	739783	320	260217	817759	459	182241	077977	138	922023	41
20	739975	320	260025	818035	458	181965	078060	138	921940	40
21	9.740167	320	10.259833	9.818310	458	10.181690	10.078143	139	9.921857	39
22	740359	320	259641	818585	458	181415	078226	139	921774	38
23	740550	319	259450	818860	458	181140	078309	139	921691	37
24	740742	319	259258	819135	458	180865	078393	139	921607	36
25	740934	319	259066	819410	458	180590	078476	139	921524	35
26	741125	319	258875	819684	458	180316	078559	139	921441	34
27	741316	319	258684	819959	458	180041	078643	139	921357	33
28	741508	318	258492	820234	458	179766	078726	139	921274	32
29	741699	318	258301	820508	457	179492	078810	139	921190	31
30	741889	318	258111	820783	457	179217	078893	139	921107	30
31	9.742080	318	10.257920	9.821057	457	10.178943	10.078977	139	9.921023	29
32	742271	318	257729	821332	457	178668	079061	140	920939	28
33	742462	317	257538	821606	457	178394	079144	140	920856	27
34	742652	317	257348	821880	457	178120	079228	140	920772	26
35	742842	317	257158	822154	457	177846	079312	140	920688	25
36	743033	317	256967	822429	457	177571	079396	140	920604	24
37	743223	317	256777	822703	457	177297	079480	140	920520	23
38	743413	316	256587	822977	456	177023	079564	140	920436	22
39	743602	316	256398	823250	456	176750	079648	140	920352	21
40	743792	316	256208	823524	456	176476	079732	140	920268	20
41	9.743982	316	10.256018	9.823798	456	10.176202	10.079816	140	9.920184	19
42	744171	316	255829	824072	456	175928	079901	140	920099	18
43	744361	315	255639	824345	456	175655	079985	140	920015	17
44	744550	315	255450	824619	456	175381	080069	141	919931	16
45	744739	315	255261	824893	456	175107	080154	141	919846	15
46	744928	315	255072	825166	456	174834	080238	141	919762	14
47	745117	315	254883	825439	455	174561	080323	141	919677	13
48	745306	314	254694	825713	455	174287	080407	141	919593	12
49	745494	314	254506	825986	455	174014	080492	141	919508	11
50	745683	314	254317	826259	455	173741	080576	141	919424	10
51	9.745871	314	10.254129	9.826532	455	10.173468	10.080661	141	9.919399	9
52	746059	314	253941	826805	455	173195	080746	141	919254	8
53	746248	313	253752	827078	455	172922	080831	141	919169	7
54	746436	313	253564	827351	455	172649	080915	141	919085	6
55	746624	313	253376	827624	455	172376	081000	141	919000	5
56	746812	313	253188	827897	454	172103	081085	142	918915	4
57	746999	313	253001	828170	454	171830	081170	142	918830	3
58	747187	312	252813	828442	454	171558	081255	142	918745	2
59	747374	312	252626	828715	454	171285	081341	142	918659	1
60	747562	312	252438	828987	454	171013	081426	142	918574	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.747562	312	10.252438	9.828987	454	10.171013	10.081426	142	9.918574	60
1	747749	312	252251	829260	454	170740	081511	142	918489	59
2	747936	312	252064	829532	454	170468	081596	142	918404	58
3	748123	311	251877	829805	454	170195	081682	142	918318	57
4	748310	311	251690	830077	454	169923	081767	142	918233	56
5	748497	311	251503	830349	453	169651	081853	142	918147	55
6	748683	311	251317	830621	453	169379	081938	143	918062	54
7	748870	311	251130	830893	453	169107	082024	143	917976	53
8	749056	310	250944	831165	453	168835	082109	143	917891	52
9	749243	310	250757	831437	453	168563	082195	143	917805	51
10	749429	310	250571	831709	453	168291	082281	143	917719	50
11	9.749615	310	10.250385	9.831981	453	10.168019	10.082366	143	9.917634	49
12	749801	310	250199	832253	453	167747	082452	143	917548	48
13	749987	310	250013	832525	453	167475	082538	143	917462	47
14	750172	309	249828	832796	453	167204	082624	143	917376	46
15	750358	309	249642	833068	452	166932	082710	143	917290	45
16	750543	309	249457	833339	452	166661	082796	143	917204	44
17	750729	309	249271	833611	452	166389	082882	144	917118	43
18	750914	308	249086	833882	452	166118	082968	144	917032	42
19	751099	308	248901	834154	452	165846	083054	144	916946	41
20	751284	308	248716	834425	452	165575	083141	144	916859	40
21	9.751469	308	10.248531	9.834696	452	10 165304	10.083227	144	9.916773	39
22	751654	308	248346	834967	452	165033	083313	144	916687	38
23	751839	308	248161	835238	452	164762	083400	144	916600	37
24	752023	307	247977	835509	452	164491	083486	144	916514	36
25	752208	307	247792	835780	451	164220	083573	144	916427	35
26	752392	307	247608	836051	451	163949	083659	144	916341	34
27	752576	307	247424	836322	451	163678	083746	144	916254	33
28	752760	307	247240	836593	451	163407	083833	145	916167	32
29	752944	306	247056	836864	451	163136	083919	145	916081	31
30	753128	306	246872	837134	451	162866	084006	145	915994	30
31	9.753312	306	10.246688	9.837405	451	10.162595	10.084093	145	9.915907	29
32	753495	306	246505	837675	451	162325	084180	145	915820	28
33	753679	306	246321	837946	451	162054	084267	145	915733	27
34	753862	305	246138	838216	451	161784	084354	145	915646	26
35	754046	305	245954	838487	450	161513	084441	145	915559	25
36	754229	305	245771	838757	450	161243	084528	145	915472	24
37	754412	305	245588	839027	450	160973	084615	145	915385	23
38	754595	305	245405	839297	450	160703	084703	145	915297	22
39	754778	304	245222	839568	450	160432	084790	145	915210	21
40	754960	304	245040	839838	450	160162	084877	146	915123	20
41	9.755143	304	10.244857	9.840108	450	10.159892	10.084965	146	9.915035	19
42	755326	304	244674	840378	450	159622	085052	146	914948	18
43	755508	304	244492	840647	450	159353	085140	146	914860	17
44	755690	304	244310	840917	450	159083	085227	146	914773	16
45	755872	303	244128	841187	450	158813	085315	146	914685	15
46	756054	303	243946	841457	449	158543	085402	146	914598	14
47	756236	303	243764	841726	449	158274	085490	146	914510	13
48	756418	303	243582	841996	449	158004	085578	146	914422	12
49	756600	303	243400	842266	449	157734	085666	146	914334	11
50	756782	302	243218	842535	449	157465	085754	147	914246	10
51	9.756963	302	10.243037	9.842805	449	10.157195	10.085842	147	9.914158	9
52	757144	302	242856	843074	449	156926	085930	147	914070	8
53	757326	302	242674	843343	449	156657	086018	147	913982	7
54	757507	302	242493	843612	449	156388	086106	147	913894	6
55	757688	301	242312	843882	449	156118	086194	147	913806	5
56	757869	301	242131	844151	448	155849	086282	147	913718	4
57	758050	301	241950	844420	448	155580	086370	147	913630	3
58	758230	301	241770	844689	448	155311	086459	147	913541	2
59	758411	301	241589	844958	448	155042	086547	147	913453	1
60	758591	301	241409	845227	448	154773	086635	147	913365	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.758591	301	10.241409	9.845227	448	10.154773	10.086635	147	9.913365	60
1	758772	300	241228	845496	448	154504	086724	147	913276	59
2	758952	300	241048	845764	448	154236	086813	148	913187	58
3	759132	300	240868	846033	448	153967	086901	148	913099	57
4	759312	300	240688	846302	448	153698	086990	148	913010	56
5	759492	300	240508	846570	447	153430	087078	148	912922	55
6	759672	299	240328	846839	447	153161	087167	148	912833	54
7	759852	299	240148	847107	447	152893	087256	148	912744	53
8	760031	299	239969	847376	447	152624	087345	148	912655	52
9	760211	299	239789	847644	447	152356	087434	148	912566	51
10	760390	299	239610	847913	447	152087	087523	148	912477	50
11	9.760569	298	10.239431	9.848181	447	10.151819	10.087612	148	9.912388	49
12	760748	298	239252	848449	447	151551	087701	149	912299	48
13	760927	298	239073	848717	447	151283	087790	149	912210	47
14	761106	298	238894	848986	447	151014	087879	149	912121	46
15	761285	298	238715	849254	447	150746	087969	149	912031	45
16	761464	298	238536	849522	447	150478	088058	149	911942	44
17	761642	297	238358	849790	446	150210	088147	149	911853	43
18	761821	297	238179	850058	446	149942	088237	149	911763	42
19	761999	297	238001	850325	446	149675	088326	149	911674	41
20	762177	297	237823	850593	446	149407	088416	149	911584	40
21	9.762356	297	10.237644	9.850861	446	10.149139	10.088505	149	9.911495	39
22	762534	296	237466	851129	446	148871	088595	149	911405	38
23	762712	296	237288	851396	446	148604	088685	150	911315	37
24	762889	296	237111	851664	446	148336	088774	150	911226	36
25	763067	296	236933	851931	446	148069	088864	150	911136	35
26	763245	296	236755	852199	446	147801	088954	150	911046	34
27	763422	296	236578	852466	446	147534	089044	150	910956	33
28	763600	295	236400	852733	445	147267	089134	150	910866	32
29	763777	295	236223	853001	445	146999	089224	150	910776	31
30	763954	295	236046	853268	445	146732	089314	150	910686	30
31	9.764131	295	10.235869	9.853535	445	10.146465	10.089404	150	9.910596	29
32	764308	295	235692	853802	445	146198	089494	150	910506	28
33	764485	294	235515	854069	445	145931	089585	150	910415	27
34	764662	294	235338	854336	445	145664	089675	151	910325	26
35	764838	294	235162	854603	445	145397	089765	151	910235	25
36	765015	294	234985	854870	445	145130	089856	151	910144	24
37	765191	294	234809	855137	445	144863	089946	151	910054	23
38	765367	294	234633	855404	445	144596	090037	151	909963	22
39	765544	293	234456	855671	444	144329	090127	151	909873	21
40	765720	293	234280	855938	444	144062	090218	151	909782	20
41	9.765896	293	10.234104	9.856204	444	10.143796	10.090309	151	9.909691	19
42	766072	293	233928	856471	444	143529	090399	151	909601	18
43	766247	293	233753	856737	444	143263	090490	151	909510	17
44	766423	293	233577	857004	444	142996	090581	151	909419	16
45	766598	292	233402	857270	444	142730	090672	152	909328	15
46	766774	292	233226	857537	444	142463	090763	152	909237	14
47	766949	292	233051	857803	444	142197	090854	152	909146	13
48	767124	292	232876	858069	444	141931	090945	152	909055	12
49	767300	292	232700	858336	444	141664	091036	152	908964	11
50	767475	291	232525	858602	443	141398	091127	152	908873	10
51	9.767649	291	10.232351	9.858868	443	10.141132	10.091219	152	9.908781	9
52	767824	291	232176	859134	443	140866	091310	152	908690	8
53	767999	291	232001	859400	443	140600	091401	152	908599	7
54	768173	291	231827	859666	443	140334	091493	152	908507	6
55	768348	290	231652	859932	443	140068	091584	153	908416	5
56	768522	290	231478	860198	443	139802	091676	153	908324	4
57	768697	290	231303	860464	443	139536	091767	153	908233	3
58	768871	290	231129	860730	443	139270	091859	153	908141	2
59	769045	290	230955	860995	443	139005	091951	153	908049	1
60	769219	290	230781	861261	443	138739	092042	153	907958	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.769219	290	10.230781	9.861261	443	10.138739	10.092042	153	9.907958	60
1	769393	289	230607	861527	443	138473	092134	153	907866	59
2	769566	289	230434	861792	442	138208	092226	153	907774	58
3	769740	289	230260	862058	442	137942	092318	153	907682	57
4	769913	289	230087	862323	442	137677	092410	153	907590	56
5	770087	289	229913	862589	442	137411	092502	153	907498	55
6	770260	288	229740	862854	442	137146	092594	153	907406	54
7	770433	288	229567	863119	442	136881	092686	154	907314	53
8	770606	288	229394	863385	442	136615	092778	154	907222	52
9	770779	288	229221	863650	442	136350	092871	154	907129	51
10	770952	288	229048	863915	442	136085	092963	154	907037	50
11	9.771125	288	10.228875	9.864180	442	10.135820	10.093055	154	9.906945	49
12	771298	287	228702	864445	442	135555	093148	154	906852	48
13	771470	287	228530	864710	442	135290	093240	154	906760	47
14	771643	287	228357	864975	441	135025	093333	154	906667	46
15	771815	287	228185	865240	441	134760	093425	154	906575	45
16	771987	287	228013	865505	441	134495	093518	154	906482	44
17	772159	287	227841	865770	441	134230	093611	155	906389	43
18	772331	286	227669	866035	441	133965	093704	155	906296	42
19	772503	286	227497	866300	441	133700	093796	155	906204	41
20	772675	286	227325	866564	441	133436	093889	155	906111	40
21	9.772847	286	10.227153	9.866829	441	10.133171	10.093982	155	9.906018	39
22	773018	286	226982	867094	441	132906	094075	155	905925	38
23	773190	286	226810	867358	441	132642	094168	155	905832	37
24	773361	285	226639	867623	441	132377	094261	155	905739	36
25	773533	285	226467	867887	441	132113	094355	155	905645	35
26	773704	285	226296	868152	441	131848	094448	155	905552	34
27	773875	285	226125	868416	441	131584	094541	155	905459	33
28	774046	285	225954	868680	440	131320	094634	156	905366	32
29	774217	285	225783	868945	440	131055	094728	156	905272	31
30	774388	284	225612	869209	440	130791	094821	156	905179	30
31	9.774558	284	10.225442	9.869473	440	10.130527	10.094915	156	9.905085	29
32	774729	284	225271	869737	440	130263	095008	156	904992	28
33	774899	284	225101	870001	440	129999	095102	156	904898	27
34	775070	284	224930	870265	440	129735	095196	156	904804	26
35	775240	284	224760	870529	440	129471	095289	156	904711	25
36	775410	283	224590	870793	440	129207	095383	156	904617	24
37	775580	283	224420	871057	440	128943	095477	156	904523	23
38	775750	283	224250	871321	440	128679	095571	157	904429	22
39	775920	283	224080	871585	440	128415	095665	157	904335	21
40	776090	283	223910	871849	439	128151	095759	157	904241	20
41	9.776259	283	10.223741	9.872112	439	10.127888	10.095853	157	9.904147	19
42	776429	282	223571	872376	439	127624	095947	157	904053	18
43	776598	282	223402	872640	439	127360	096041	157	903959	17
44	776768	282	223232	872903	439	127097	096136	157	903864	16
45	776937	282	223063	873167	439	126833	096230	157	903770	15
46	777106	282	222894	873430	439	126570	096324	157	903676	14
47	777275	281	222725	873694	439	126306	096419	157	903581	13
48	777444	281	222556	873957	439	126043	096513	157	903487	12
49	777613	281	222387	874220	439	125780	096608	158	903392	11
50	777781	281	222219	874484	439	125516	096702	158	903298	10
51	9.777950	281	10.222050	9.874747	439	10.125253	10.096797	158	9.903203	9
52	778119	281	221881	875010	439	124990	096892	158	903108	8
53	778287	280	221713	875273	438	124727	096986	158	903014	7
54	778455	280	221545	875536	438	124464	097081	158	902919	6
55	778624	280	221376	875800	438	124200	097176	158	902824	5
56	778792	280	221208	876063	438	123937	097271	158	902729	4
57	778960	280	221040	876326	438	123674	097366	158	902634	3
58	779128	280	220872	876589	438	123411	097461	159	902539	2
59	779295	279	220705	876851	438	123149	097556	159	902444	1
60	779463	279	220537	877114	438	122886	097651	159	902349	0
	Cosine.		*Secant.*	*Cotang.*		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.779463	279	10.220537	9.877114	438	10.122886	10.097651	159	9.902349	60
1	779631	279	220369	877377	438	122623	097747	159	902253	59
2	779798	279	220202	877640	438	122360	097842	159	902158	58
3	779966	279	220034	877903	438	122097	097937	159	902063	57
4	780133	279	219867	878165	438	121835	098033	159	901967	56
5	780300	278	219700	878428	438	121572	098128	159	901872	55
6	780467	278	219533	878691	438	121309	098224	159	901776	54
7	780634	278	219366	878953	437	121047	098319	159	901681	53
8	780801	278	219199	879216	437	120784	098415	159	901585	52
9	780968	278	219032	879478	437	120522	098510	159	901490	51
10	781134	278	218866	879741	437	120259	098606	160	901394	50
11	9.781301	277	10.218699	9.880003	437	10.119997	10.098702	160	9.901298	49
12	781468	277	218532	880265	437	119735	098798	160	901202	48
13	781634	277	218366	880528	437	119472	098894	160	901106	47
14	781800	277	218200	880790	437	119210	098990	160	901010	46
15	781966	277	218034	881052	437	118948	099086	160	900914	45
16	782132	277	217868	881314	437	118686	099182	160	900818	44
17	782298	276	217702	881576	437	118424	099278	160	900722	43
18	782464	276	217536	881839	437	118161	099374	160	900626	42
19	782630	276	217370	882101	437	117899	099471	160	900529	41
20	782796	276	217204	882363	436	117637	099567	161	900433	40
21	9 782961	276	10.217039	9.882625	436	10 117375	10 099663	161	9.900337	39
22	783127	276	216873	882887	436	117113	099760	161	900240	38
23	783292	275	216708	883148	436	116852	099856	161	900144	37
24	783458	275	216542	883410	436	116590	099953	161	900047	36
25	783623	275	216377	883672	436	116328	100049	161	899951	35
26	783788	275	216212	883934	436	116066	100146	161	899854	34
27	783953	275	216047	884196	436	115804	100243	161	899757	33
28	784118	275	215882	884457	436	115543	100340	161	899660	32
29	784282	274	215718	884719	436	115281	100436	161	899564	31
30	784447	274	215553	884980	436	115020	100533	162	899467	30
31	9.784612	274	10.215388	9.885242	436	10.114758	10.100630	162	9.899370	29
32	784776	274	215224	885503	436	114497	100727	162	899273	28
33	784941	274	215059	885765	436	114235	100824	162	899176	27
34	785105	274	214895	886026	436	113974	100922	162	899078	26
35	785269	273	214731	886288	436	113712	101019	162	898981	25
36	785433	273	214567	886549	435	113451	101116	162	898884	24
37	785597	273	214403	886810	435	113190	101213	162	898787	23
38	785761	273	214239	887072	435	112928	101311	162	898689	22
39	785925	273	214075	887333	435	112667	101408	162	898592	21
40	786089	273	213911	887594	435	112406	101506	163	898494	20
41	9.786252	272	10.213748	9.887855	435	10.112145	10.101603	163	9.898397	19
42	786416	272	213584	888116	435	111884	101701	163	898299	18
43	786579	272	213421	888377	435	111623	101798	163	898202	17
44	786742	272	213258	888639	435	111361	101896	163	898104	16
45	786906	272	213094	888900	435	111100	101994	163	898006	15
46	787069	272	212931	889160	435	110840	102092	163	897908	14
47	787232	271	212768	889421	435	110579	102190	163	897810	13
48	787395	271	212605	889682	435	110318	102288	163	897712	12
49	787557	271	212443	889943	435	110057	102386	163	897614	11
50	787720	271	212280	890204	434	109796	102484	163	897516	10
51	9.787883	271	10.212117	9.890465	434	10.109535	10.102582	164	9 897418	9
52	788045	271	211955	890725	434	109275	102680	164	897320	8
53	788208	271	211792	890986	434	109014	102778	164	897222	7
54	788370	270	211630	891247	434	108753	102877	164	897123	6
55	788532	270	211468	891507	434	108493	102975	164	897025	5
56	788694	270	211306	891768	434	108232	103074	164	896926	4
57	788856	270	211144	892028	434	107972	103172	164	896828	3
58	789018	270	210982	892289	434	107711	103271	164	896729	2
59	789180	270	210820	892549	434	107451	103369	164	896631	1
60	789342	269	210658	892810	434	107190	103468	164	896532	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.789342	269	10.210658	9.892810	434	10.107190	10.103468	164	9.896532	60
1	789504	269	210496	893070	434	106930	103567	165	896433	59
2	789665	269	210335	893331	434	106669	103665	165	896335	58
3	789827	269	210173	893591	434	106409	103764	165	896236	57
4	789988	269	210012	893851	434	106149	103863	165	896137	56
5	790149	269	209851	894111	434	105889	103962	165	896038	55
6	790310	268	209690	894371	434	105629	104061	165	895939	54
7	790471	268	209529	894632	434	105368	104160	165	895840	53
8	790632	268	209368	894892	433	105108	104259	165	895741	52
9	790793	268	209207	895152	433	104848	104359	165	895641	51
10	790954	268	209046	895412	433	104588	104458	165	895542	50
11	9.791115	268	10.208885	9.895672	433	10.104328	10.104557	166	9.895443	49
12	791275	267	208725	895932	433	104068	104657	166	895343	48
13	791436	267	208564	896192	433	103808	104756	166	895244	47
14	791596	267	208404	896452	433	103548	104855	166	895145	46
15	791757	267	208243	896712	433	103288	104955	166	895045	45
16	791917	267	208083	896971	433	103029	105055	166	894945	44
17	792077	267	207923	897231	433	102769	105154	166	894846	43
18	792237	266	207763	897491	433	102509	105254	166	894746	42
19	792397	266	207603	897751	433	102249	105354	166	894646	41
20	792557	266	207443	898010	433	101990	105454	166	894546	40
21	9.792716	266	10.207284	9.898270	433	10.101730	10.105554	167	9.894446	39
22	792876	266	207124	898530	433	101470	105654	167	894346	38
23	793035	266	206965	898789	433	101211	105754	167	894246	37
24	793195	265	206805	899049	432	100951	105854	167	894146	36
25	793354	265	206646	899308	432	100692	105954	167	894046	35
26	793514	265	206486	899568	432	100432	106054	167	893946	34
27	793673	265	206327	899827	432	100173	106154	167	893846	33
28	793832	265	206168	900086	432	099914	106255	167	893745	32
29	793991	265	206009	900346	432	099654	106355	167	893645	31
30	794150	264	205850	900605	432	099395	106456	167	893544	30
31	9.794308	264	10.205692	9.900864	432	10.099136	10.106556	168	9.893444	29
32	794467	264	205533	901124	432	098876	106657	168	893343	28
33	794626	264	205374	901383	432	098617	106757	168	893243	27
34	794784	264	205216	901642	432	098358	106858	168	893142	26
35	794942	264	205058	901901	432	098099	106959	168	893041	25
36	795101	264	204899	902160	432	097840	107060	168	892940	24
37	795259	263	204741	902419	432	097581	107161	168	892839	23
38	795417	263	204583	902679	432	097321	107261	168	892739	22
39	795575	263	204425	902938	432	097062	107362	168	892638	21
40	795733	263	204267	903197	431	096803	107464	168	892536	20
41	9.795891	263	10.204109	9.903455	431	10.096545	10.107565	169	9.892435	19
42	796049	263	203951	903714	431	096286	107666	169	892334	18
43	796206	263	203794	903973	431	096027	107767	169	892233	17
44	796364	262	203636	904232	431	095768	107868	169	892132	16
45	796521	262	203479	904491	431	095509	107970	169	892030	15
46	796679	262	203321	904750	431	095250	108071	169	891929	14
47	796836	262	203164	905008	431	094992	108173	169	891827	13
48	796993	262	203007	905267	431	094733	108274	169	891726	12
49	797150	262	202850	905526	431	094474	108376	169	891624	11
50	797307	261	202693	905784	431	094216	108477	170	891523	10
51	9.797464	261	10.202536	9.906043	431	10.093957	10.108579	170	9.891421	9
52	797621	261	202379	906302	431	093698	108681	170	891319	8
53	797777	261	202223	906560	431	093440	108783	170	891217	7
54	797934	261	202066	906819	431	093181	108885	170	891115	6
55	798091	261	201909	907077	431	092923	108987	170	891013	5
56	798247	261	201753	907336	431	092664	109089	170	890911	4
57	798403	260	201597	907594	431	092406	109191	170	890809	3
58	798560	260	201440	907852	431	092148	109293	170	890707	2
59	798716	260	201284	908111	431	091889	109395	170	890605	1
60	798872	260	201128	908369	430	091631	109497	170	890503	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.798872	260	10.201128	9.908369	430	10.091631	10.109497	170	9.890503	60
1	799028	260	200972	908628	430	091372	109600	171	890400	59
2	799184	260	200816	908886	430	091114	109702	171	890298	58
3	799339	259	200661	909144	430	090856	109805	171	890195	57
4	799495	259	200505	909402	430	090598	109907	171	890093	56
5	799651	259	200349	909660	430	090340	110010	171	889990	55
6	799806	259	200194	909918	430	090082	110112	171	889888	54
7	799962	259	200038	910177	430	089823	110215	171	889785	53
8	800117	259	199883	910435	430	089565	110318	171	889682	52
9	800272	258	199728	910693	430	089307	110421	171	889579	51
10	800427	258	199573	910951	430	089049	110523	171	889477	50
11	9.800582	258	10.199418	9.911209	430	10.088791	10.110626	172	9.889374	49
12	800737	258	199263	911467	430	088533	110729	172	889271	48
13	800892	258	199108	911724	430	088276	110832	172	889168	47
14	801047	258	198953	911982	430	088018	110936	172	889064	46
15	801201	258	198799	912240	430	087760	111039	172	888961	45
16	801356	257	198644	912498	430	087502	111142	172	888858	44
17	801511	257	198489	912756	430	087244	111245	172	888755	43
18	801665	257	198335	913014	429	086986	111349	172	888651	42
19	801819	257	198181	913271	429	086729	111452	172	888548	41
20	801973	257	198027	913529	429	086471	111556	173	888444	40
21	9.802128	257	10.197872	9.913787	429	10.086213	10.111659	173	9.888341	39
22	802282	256	197718	914044	429	085956	111763	173	888237	38
23	802436	256	197564	914302	429	085698	111866	173	888134	37
24	802589	256	197411	914560	429	085440	111970	173	888030	36
25	802743	256	197257	914817	429	085183	112074	173	887926	35
26	802897	256	197103	915075	429	084925	112178	173	887822	34
27	803050	256	196950	915332	429	084668	112282	173	887718	33
28	803204	256	196796	915590	429	084410	112386	173	887614	32
29	803357	255	196643	915847	429	084153	112490	173	887510	31
30	803511	255	196489	916104	429	083896	112594	174	887406	30
31	9.803664	255	10.196336	9.916362	429	10.083638	10.112698	174	9.887302	29
32	803817	255	196183	916619	429	083381	112802	174	887198	28
33	803970	255	196030	916877	429	083123	112907	174	887093	27
34	804123	255	195877	917134	429	082866	113011	174	886989	26
35	804276	254	195724	917391	429	082609	113115	174	886885	25
36	804428	254	195572	917648	429	082352	113220	174	886780	24
37	804581	254	195419	917905	429	082095	113324	174	886676	23
38	804734	254	195266	918163	428	081837	113429	174	886571	22
39	804886	254	195114	918420	428	081580	113534	174	886466	21
40	805039	254	194961	918677	428	081323	113638	175	886362	20
41	9.805191	254	10.194809	9.918934	428	10.081066	10.113743	175	9.886257	19
42	805343	253	194657	919191	428	080809	113848	175	886152	18
43	805495	253	194505	919448	428	080552	113953	175	886047	17
44	805647	253	194353	919705	428	080295	114058	175	885942	16
45	805799	253	194201	919962	428	080038	114163	175	885837	15
46	805951	253	194049	920219	428	079781	114268	175	885732	14
47	806103	253	193897	920476	428	079524	114373	175	885627	13
48	806254	253	193746	920733	428	079267	114478	175	885522	12
49	806406	252	193594	920990	428	079010	114584	175	885416	11
50	806557	252	193443	921247	428	078753	114689	176	885311	10
51	9.806709	252	10.193291	9.921503	428	10.078497	10.114795	176	9.885205	9
52	806860	252	193140	921760	428	078240	114900	176	885100	8
53	807011	252	192989	922017	428	077983	115006	176	884994	7
54	807163	252	192837	922274	428	077726	115111	176	884889	6
55	807314	252	192686	922530	428	077470	115217	176	884783	5
56	807465	251	192535	922787	428	077213	115323	176	884677	4
57	807615	251	192385	923044	428	076956	115428	176	884572	3
58	807766	251	192234	923300	428	076700	115534	176	884460	2
59	807917	251	192083	923557	427	076443	115640	176	884360	1
60	808067	251	191933	923813	427	076187	115746	177	884254	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.808067	251	10.191933	9.923813	428	10.076187	10.115746	177	9.884254	60
1	808218	251	191782	924070	428	075930	115852	177	884148	59
2	808368	251	191632	924327	427	075673	115958	177	884042	58
3	808519	250	191481	924583	427	075417	116064	177	883936	57
4	808669	250	191331	924840	427	075160	116171	177	883829	56
5	808819	250	191181	925096	427	074904	116277	177	883723	55
6	808969	250	191031	925352	427	074648	116383	177	883617	54
7	809119	250	190881	925609	427	074391	116490	177	883510	53
8	809269	250	190731	925865	427	074135	116596	177	883404	52
9	809419	249	190581	926122	427	073878	116703	178	883297	51
10	809569	249	190431	926378	427	073622	116809	178	883191	50
11	9.809718	249	10.190282	9.926634	427	10.073366	10.116916	178	9.883084	49
12	809868	249	190132	926890	427	073110	117023	178	882977	48
13	810017	249	189983	927147	427	072853	117129	178	882871	47
14	810167	249	189833	927403	427	072597	117236	178	882764	46
15	810316	248	189684	927659	427	072341	117343	178	882657	45
16	810465	248	189535	927915	427	072085	117450	178	882550	44
17	810614	248	189386	928171	427	071829	117557	178	882443	43
18	810763	248	189237	928427	427	071573	117664	179	882336	42
19	810912	248	189088	928683	427	071317	117771	179	882229	41
20	811061	248	188939	928940	427	071060	117879	179	882121	40
21	9.811210	248	10.188790	9.929196	427	10.070804	10.117986	179	9.882014	39
22	811358	247	188642	929452	427	070548	118093	179	881907	38
23	811507	247	188493	929708	427	070292	118201	179	881799	37
24	811655	247	188345	929964	427	070036	118308	179	881692	36
25	811804	247	188196	930220	427	069780	118416	179	881584	35
26	811952	247	188048	930475	426	069525	118523	179	881477	34
27	812100	247	187900	930731	426	069269	118631	179	881369	33
28	812248	247	187752	930987	426	069013	118739	180	881261	32
29	812396	246	187604	931243	426	068757	118847	180	881153	31
30	812544	246	187456	931499	426	068501	118954	180	881046	30
31	9.812692	246	10.187308	9.931755	426	10.068245	10.119062	180	9.880938	29
32	812840	246	187160	932010	426	067990	119170	180	880830	28
33	812988	246	187012	932266	426	067734	119278	180	880722	27
34	813135	246	186865	932522	426	067478	119387	180	880613	26
35	813283	246	186717	932778	426	067222	119495	180	880505	25
36	813430	245	186570	933033	426	066967	119603	180	880397	24
37	813578	245	186422	933289	426	066711	119711	181	880289	23
38	813725	245	186275	933545	426	066455	119820	181	880180	22
39	813872	245	186128	933800	426	066200	119928	181	880072	21
40	814019	245	185981	934056	426	065944	120037	181	879963	20
41	9.814166	245	10.185834	9.934311	426	10.065689	10.120145	181	9.879855	19
42	814313	245	185687	934567	426	065433	120254	181	879746	18
43	814460	244	185540	934823	426	065177	120363	181	879637	17
44	814607	244	185393	935078	426	064922	120471	181	879529	16
45	814753	244	185247	935333	426	064667	120580	181	879420	15
46	814900	244	185100	935589	426	064411	120689	181	879311	14
47	815046	244	184954	935844	426	064156	120798	182	879202	13
48	815193	244	184807	936100	426	063900	120907	182	879093	12
49	815339	244	184661	936355	426	063645	121016	182	878984	11
50	815485	243	184515	936610	426	063390	121125	182	878875	10
51	9.815632	243	10.184368	9.936866	425	10.063134	10.121234	182	9.878766	9
52	815778	243	184222	937121	425	062879	121344	182	878656	8
53	815924	243	184076	937376	425	062624	121453	182	878547	7
54	816069	243	183931	937632	425	062368	121562	182	878438	6
55	816215	243	183785	937887	425	062113	121672	182	878328	5
56	816361	243	183639	938142	425	061858	121781	183	878219	4
57	816507	242	183493	938398	425	061602	121891	183	878109	3
58	816652	242	183348	938653	425	061347	122001	183	877999	2
59	816798	242	183202	938908	425	061092	122110	183	877890	1
60	816943	242	183057	939163	425	060837	122220	183	877780	0
	Cosine.		*Secant.*	*Cotang.*		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.816943	242	10.183057	9.939163	425	10.060837	10.122220	183	9.877780	60
1	817088	242	182912	939418	425	060582	122330	183	877670	59
2	817233	242	182767	939673	425	060327	122440	183	877560	58
3	817379	242	182621	939928	425	060072	122550	183	877450	57
4	817524	241	182476	940183	425	059817	122660	183	877340	56
5	817668	241	182332	940438	425	059562	122770	184	877230	55
6	817813	241	182187	940694	425	059306	122880	184	877120	54
7	817958	241	182042	940949	425	059051	122990	184	877010	53
8	818103	241	181897	941204	425	058796	123101	184	876899	52
9	818247	241	181753	941458	425	058542	123211	184	876789	51
10	818392	241	181608	941714	425	058286	123322	184	876678	50
11	9.818536	240	10.181464	9.941968	425	10.058032	10.123432	184	9.876568	49
12	818681	240	181319	942223	425	057777	123543	184	876457	48
13	818825	240	181175	942478	425	057522	123653	184	876347	47
14	818969	240	181031	942733	425	057267	123764	185	876236	46
15	819113	240	180887	942988	425	057012	123875	185	876125	45
16	819257	240	180743	943243	425	056757	123986	185	876014	44
17	819401	240	180599	943498	425	056502	124096	185	875904	43
18	819545	239	180455	943752	425	056248	124207	185	875793	42
19	819689	239	180311	944007	425	055993	124318	185	875682	41
20	819832	239	180168	944262	425	055738	124429	185	875571	40
21	9.819976	239	10.180024	9.944517	425	10.055483	10.124541	185	9.875459	39
22	820120	239	179880	944771	424	055229	124652	185	875348	38
23	820263	239	179737	945026	424	054974	124763	185	875237	37
24	820406	239	179594	945281	424	054719	124874	186	875126	36
25	820550	238	179450	945535	424	054465	124986	186	875014	35
26	820693	238	179307	945790	424	054210	125097	186	874903	34
27	820836	238	179164	946045	424	053955	125209	186	874791	33
28	820979	238	179021	946299	424	053701	125320	186	874680	32
29	821122	238	178878	946554	424	053446	125432	186	874568	31
30	821265	238	178735	946808	424	053192	125544	186	874456	30
31	9.821407	238	10.178593	9.947063	424	10.052937	10.125656	186	9.874344	29
32	821550	238	178450	947318	424	052682	125768	187	874232	28
33	821693	237	178307	947572	424	052428	125879	187	874121	27
34	821835	237	178165	947826	424	052174	125991	187	874009	26
35	821977	237	178023	948081	424	051919	126104	187	873896	25
36	822120	237	177880	948336	424	051664	126216	187	873784	24
37	822262	237	177738	948590	424	051410	126328	187	873672	23
38	822404	237	177596	948844	424	051156	126440	187	873560	22
39	822546	237	177454	949099	424	050901	126552	187	873448	21
40	822688	236	177312	949353	424	050647	126665	187	873335	20
41	9.822830	236	10.177170	9.949607	424	10.050393	10.126777	187	9.873223	19
42	822972	236	177028	949862	424	050138	126890	188	873110	18
43	823114	236	176886	950116	424	049884	127002	188	872998	17
44	823255	236	176745	950370	424	049630	127115	188	872885	16
45	823397	236	176603	950625	424	049375	127228	188	872772	15
46	823539	236	176461	950879	424	049121	127341	188	872659	14
47	823680	235	176320	951133	424	048867	127453	188	872547	13
48	823821	235	176179	951388	424	048612	127566	188	872434	12
49	823963	235	176037	951642	424	048358	127679	188	872321	11
50	824104	235	175896	951896	424	048104	127792	188	872208	10
51	9.824245	235	10.175755	9.952150	424	10.047850	10.127905	189	9.872095	9
52	824386	235	175614	952405	424	047595	128019	189	871981	8
53	824527	235	175473	952659	424	047341	128132	189	871868	7
54	824668	234	175332	952913	424	047087	128245	189	871755	6
55	824808	234	175192	953167	424	046833	128359	189	871641	5
56	824949	234	175051	953421	423	046579	128472	189	871528	4
57	825090	234	174910	953675	423	046325	128586	189	871414	3
58	825230	234	174770	953929	423	046071	128699	189	871301	2
59	825371	234	174629	954183	423	045817	128813	189	871187	1
60	825511	234	174489	954437	423	045563	128927	190	871073	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.825511	234	10.174489	9.954437	423	10.045563	10.128927	190	9.871073	60
1	825651	233	174349	954691	423	045309	129040	190	870960	59
2	825791	233	174209	954945	423	045055	129154	190	870846	58
3	825931	233	174069	955200	423	044800	129268	190	870732	57
4	826071	233	173929	955454	423	044546	129382	190	870618	56
5	826211	233	173789	955707	423	044293	129496	190	870504	55
6	826351	233	173649	955961	423	044039	129610	190	870390	54
7	826491	233	173509	956215	423	043785	129724	190	870276	53
8	826631	233	173369	956469	423	043531	129839	190	870161	52
9	826770	232	173230	956723	423	043277	129953	191	870047	51
10	826910	232	173090	956977	423	043023	130067	191	869933	50
11	9.827049	232	10.172951	9.957231	423	10.042769	10.130182	191	9.869818	49
12	827189	232	172811	957485	423	042515	130296	191	869704	48
13	827328	232	172672	957739	423	042261	130411	191	869589	47
14	827467	232	172533	957993	423	042007	130526	191	869474	46
15	827606	232	172394	958246	423	041754	130640	191	869360	45
16	827745	232	172255	958500	423	041500	130755	191	869245	44
17	827884	231	172116	958754	423	041246	130870	191	869130	43
18	828023	231	171977	959008	423	040992	130985	192	869015	42
19	828162	231	171838	959262	423	040738	131100	192	868900	41
20	828301	231	171699	959516	423	040484	131215	192	868785	40
21	9.828439	231	10.171561	9.959769	423	10.040231	10.131330	192	9.868670	39
22	828578	231	171422	960023	423	039977	131445	192	868555	38
23	828716	231	171284	960277	423	039723	131560	192	868440	37
24	828855	230	171145	960531	423	039469	131676	192	868324	36
25	828993	230	171007	960784	423	039216	131791	192	868209	35
26	829131	230	170869	961038	423	038962	131907	192	868093	34
27	829269	230	170731	961291	423	038709	132022	193	867978	33
28	829407	230	170593	961545	423	038455	132138	193	867862	32
29	829545	230	170455	961799	423	038201	132253	193	867747	31
30	829683	230	170317	962052	423	037948	132369	193	867631	30
31	9.829821	229	10.170179	9.962306	423	10.037694	10.132485	193	9.867515	29
32	829959	229	170041	962560	423	037440	132601	193	867399	28
33	830097	229	169903	962813	423	037187	132717	193	867283	27
34	830234	229	169766	963067	423	036933	132833	193	867167	26
35	830372	229	169628	963320	423	036680	132949	193	867051	25
36	830509	229	169491	963574	423	036426	133065	194	866935	24
37	830646	229	169354	963827	423	036173	133181	194	866819	23
38	830784	229	169216	964081	423	035919	133297	194	866703	22
39	830921	228	169079	964335	423	035665	133414	194	866586	21
40	831058	228	168942	964588	422	035412	133530	194	866470	20
41	9.831195	228	10.168805	9.964842	422	10.035158	10.133647	194	9.866353	19
42	831332	228	168668	965095	422	034905	133763	194	866237	18
43	831469	228	168531	965349	422	034651	133880	194	866120	17
44	831606	228	168394	965602	422	034398	133996	195	866004	16
45	831742	228	168258	965855	422	034145	134113	195	865887	15
46	831879	228	168121	966109	422	033891	134230	195	865770	14
47	832015	227	167985	966362	422	033638	134347	195	865653	13
48	832152	227	167848	966616	422	033384	134464	195	865536	12
49	832288	227	167712	966869	422	033131	134581	195	865419	11
50	832425	227	167575	967123	422	032877	134698	195	865302	10
51	9.832561	227	10.167439	9.967376	422	10.032624	10.134815	195	9.865185	9
52	832697	227	167303	967629	422	032371	134932	195	865068	8
53	832833	227	167167	967883	422	032117	135050	195	864950	7
54	832969	226	167031	968136	422	031864	135167	196	864833	6
55	833105	226	166895	968389	422	031611	135284	196	864716	5
56	833241	226	166759	968643	422	031357	135402	196	864598	4
57	833377	226	166623	968896	422	031104	135519	196	864481	3
58	833512	226	166488	969149	422	030851	135637	196	864363	2
59	833648	226	166352	969403	422	030597	135755	196	864245	1
60	833783	226	166217	969656	422	030344	135873	196	864127	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.833783	226	10.166217	9.969656	422	10.030344	10.135873	196	9.864127	60
1	833919	226	166081	969909	422	030091	135990	196	864010	59
2	834054	225	165946	970162	422	029838	136108	197	863892	58
3	834189	225	165811	970416	422	029584	136226	197	863774	57
4	834325	225	165675	970669	422	029331	136344	197	863656	56
5	834460	225	165540	970922	422	029078	136462	197	863538	55
6	834595	225	165405	971175	422	028825	136581	197	863419	54
7	834730	225	165270	971429	422	028571	136699	197	863301	53
8	834865	225	165135	971682	422	028318	136817	197	863183	52
9	834999	224	165001	971935	422	028065	136936	197	863064	51
10	835134	224	164866	972188	422	027812	137054	198	862946	50
11	9.835269	224	10.164731	9.972441	422	10.027559	10.137173	198	9.862827	49
12	835403	224	164597	972694	422	027306	137291	198	862709	48
13	835538	224	164462	972948	422	027052	137410	198	862590	47
14	835672	224	164328	973201	422	026799	137529	198	862471	46
15	835807	224	164193	973454	422	026546	137647	198	862353	45
16	835941	224	164059	973707	422	026293	137766	198	862234	44
17	836075	223	163925	973960	422	026040	137885	198	862115	43
18	836209	223	163791	974213	422	025787	138004	198	861996	42
19	836343	223	163657	974466	422	025534	138123	198	861877	41
20	836477	223	163523	974719	422	025281	138242	199	861758	40
21	9.836611	223	10.163389	9.974973	422	10.025027	10.138362	199	9.861638	39
22	836745	223	163255	975226	422	024774	138481	199	861519	38
23	836878	223	163122	975479	422	024521	138600	199	861400	37
24	837012	222	162988	975732	422	024268	138720	199	861280	36
25	837146	222	162854	975985	422	024015	138839	199	861161	35
26	837279	222	162721	976238	422	023762	138959	199	861041	34
27	837412	222	162588	976491	422	023509	139078	199	860922	33
28	837546	222	162454	976744	422	023256	139198	199	860802	32
29	837679	222	162321	976997	422	023003	139318	200	860682	31
30	837812	222	162188	977250	422	022750	139438	200	860562	30
31	9.837945	222	10.162055	9.977503	422	10.022497	10.139558	200	9.860442	29
32	838078	221	161922	977756	422	022244	139678	200	860322	28
33	838211	221	161789	978009	422	021991	139798	200	860202	27
34	838344	221	161656	978262	422	021738	139918	200	860082	26
35	838477	221	161523	978515	422	021485	140038	200	859962	25
36	838610	221	161390	978768	422	021232	140158	200	859842	24
37	838742	221	161258	979021	422	020979	140279	201	859721	23
38	838875	221	161125	979274	422	020726	140399	201	859601	22
39	839007	221	160993	979527	422	020473	140520	201	859480	21
40	839140	220	160860	979780	422	020220	140640	201	859360	20
41	9.839272	220	10.160728	9.980033	422	10.019967	10.140761	201	9.859239	19
42	839404	220	160596	980286	422	019714	140881	201	859119	18
43	839536	220	160464	980538	422	019462	141002	201	858998	17
44	839668	220	160332	980791	422	019209	141123	201	858877	16
45	839800	220	160200	981044	422	018956	141244	202	858756	15
46	839932	220	160068	981297	421	018703	141365	202	858635	14
47	840064	219	159936	981550	421	018450	141486	202	858514	13
48	840196	219	159804	981803	421	018197	141607	202	858393	12
49	840328	219	159672	982056	421	017944	141728	202	858272	11
50	840459	219	159541	982309	421	017691	141849	202	858151	10
51	9.840591	219	10.159409	9.982562	421	10.017438	10.141971	202	9.858029	9
52	840722	219	159278	982814	421	017186	142092	202	857908	8
53	840854	219	159146	983067	421	016933	142214	202	857786	7
54	840985	219	159015	983320	421	016680	142335	203	857665	6
55	841116	218	158884	983573	421	016427	142457	203	857543	5
56	841247	218	158753	983826	421	016174	142578	203	857422	4
57	841378	218	158622	984079	421	015921	142700	203	857300	3
58	841509	218	158491	984331	421	015669	142822	203	857178	2
59	841640	218	158360	984584	421	015416	142944	203	857056	1
60	841771	218	158229	984837	421	015163	143066	203	856934	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

M.	Sine.	D.	Cosec.	Tang.	D.	Cotang.	Secant.	D.	Cosine.	
0	9.841771	218	10.158229	9.984837	421	10.015163	10.143066	203	9.856934	60
1	841902	218	158098	985090	421	014910	143188	203	856812	59
2	842033	218	157967	985343	421	014657	143310	204	856690	58
3	842163	217	157837	985596	421	014404	143432	204	856568	57
4	842294	217	157706	985848	421	014152	143554	204	856446	56
5	842424	217	157576	986101	421	013899	143677	204	856323	55
6	842555	217	157445	986354	421	013646	143799	204	856201	54
7	842685	217	157315	986607	421	013393	143921	204	856078	53
8	842815	217	157185	986860	421	013140	144044	204	855956	52
9	842946	217	157054	987112	421	012888	144167	204	855833	51
10	843076	217	156924	987365	421	012635	144289	205	855711	50
11	9.843206	216	10.156794	9.987618	421	10.012382	10.144412	205	9.855588	49
12	843336	216	156664	987871	421	012129	144535	205	855465	48
13	843466	216	156534	988123	421	011877	144658	205	855342	47
14	843595	216	156405	988376	421	011624	144781	205	855219	46
15	843725	216	156275	988629	421	011371	144904	205	855096	45
16	843855	216	156145	988882	421	011118	145027	205	854973	44
17	843984	216	156016	989134	421	010866	145150	205	854850	43
18	844114	216	155886	989387	421	010613	145273	206	854727	42
19	844243	215	155757	989640	421	010360	145397	206	854603	41
20	844372	215	155628	989893	421	010107	145520	206	854480	40
21	9.844502	215	10.155498	9.990145	421	10.009855	10.145644	206	9.854356	39
22	844631	215	155369	990398	421	009602	145767	206	854233	38
23	844760	215	155240	990651	421	009349	145891	206	854109	37
24	844889	215	155111	990903	421	009097	146014	206	853986	36
25	845018	215	154982	991156	421	008844	146138	206	853862	35
26	845147	215	154853	991409	421	008591	146262	206	853738	34
27	845276	214	154724	991662	421	008338	146386	207	853614	33
28	845405	214	154595	991914	421	008086	146510	207	853490	32
29	845533	214	154467	992167	421	007833	146634	207	853366	31
30	845662	214	154338	992420	421	007580	146758	207	853242	30
31	9.845790	214	10.154210	9.992672	421	10.007328	10.146882	207	9.853118	29
32	845919	214	154081	992925	421	007075	147006	207	852994	28
33	846047	214	153953	993178	421	006822	147131	207	852869	27
34	846175	214	153825	993430	421	006570	147255	207	852745	26
35	846304	214	153696	993683	421	006317	147380	207	852620	25
36	846432	213	153568	993936	421	006064	147504	208	852496	24
37	846560	213	153440	994189	421	005811	147629	208	852371	23
38	846688	213	153312	994441	421	005559	147753	208	852247	22
39	846816	213	153184	994694	421	005306	147878	208	852122	21
40	846944	213	153056	994947	421	005053	148003	208	851997	20
41	9.847071	213	10.152929	9.995199	421	10.004801	10.148128	208	9.851872	19
42	847199	213	152801	995452	421	004548	148253	208	851747	18
43	847327	213	152673	995705	421	004295	148378	208	851622	17
44	847454	212	152546	995957	421	004043	148503	209	851497	16
45	847582	212	152418	996210	421	003790	148628	209	851372	15
46	847709	212	152291	996463	421	003537	148754	209	851246	14
47	847836	212	152164	996715	421	003285	148879	209	851121	13
48	847964	212	152036	996968	421	003032	149004	209	850996	12
49	848091	212	151909	997221	421	002779	149130	209	850870	11
50	848218	212	151782	997473	421	002527	149255	209	850745	10
51	9.848345	212	10.151655	9.997726	421	10.002274	10.149381	209	9.850619	9
52	848472	211	151528	997979	421	002021	149507	210	850493	8
53	848599	211	151401	998231	421	001769	149632	210	850368	7
54	848726	211	151274	998484	421	001516	149758	210	850242	6
55	848852	211	151148	998737	421	001263	149884	210	850116	5
56	848979	211	151021	998989	421	001011	150010	210	849990	4
57	849106	211	150894	999242	421	000758	150136	210	849864	3
58	849232	211	150768	999495	421	000505	150262	210	849738	2
59	849359	211	150641	999747	421	000253	150389	210	849611	1
60	849485	211	150515	10.000000	421	000000	150515	210	849485	0
	Cosine.		Secant.	Cotang.		Tang.	Cosec.		Sine.	M.

TABLE IV.

A TABLE OF THE NATURAL SINES AND COSINES FROM WHICH THE TANGENTS, COTANGENTS, SECANTS, AND COSECANTS CAN BE FOUND.

M.	0°	1	2°	3	4°	5°	6°	7°	8°	M.
0	000000	017452	034899	052336	069756	087156	104528	121869	139173	60
1	000291	017743	035190	052626	070047	087446	104818	122158	139461	59
2	000582	018034	035481	052917	070337	087735	105107	122447	139749	58
3	000873	018325	035772	053207	070627	088025	105396	122735	140037	57
4	001164	018616	036062	053498	070917	088315	105686	123024	140325	56
5	001454	018907	036353	053788	071207	088605	105975	123313	140613	55
6	001745	019197	036644	054079	071497	088894	106264	123601	140901	54
7	002036	019488	036934	054369	071788	089184	106553	123890	141189	53
8	002327	019779	037225	054660	072078	089474	106843	124179	141477	52
9	002618	020070	037516	054950	072368	089763	107132	124467	141765	51
10	002909	020361	037806	055241	072658	090053	107421	124756	142053	50
11	003200	020652	038097	055531	072948	090343	107710	125045	142341	49
12	003491	020942	038388	055822	073238	090633	107999	125333	142629	48
13	003782	021233	038678	056112	073528	090922	108289	125622	142917	47
14	004072	021524	038969	056402	073818	091212	108578	125910	143205	46
15	004363	021815	039260	056693	074108	091502	108867	126199	143493	45
16	004654	022106	039550	056983	074399	091791	109156	126488	143780	44
17	004945	022397	039841	057274	074689	092081	109445	126776	144068	43
18	005236	022687	040132	057564	074979	092371	109734	127065	144356	42
19	005527	022978	040422	057854	075269	092660	110023	127353	144644	41
20	005818	023269	040713	058145	075559	092950	110313	127642	144932	40
21	006109	023560	041004	058435	075849	093239	110602	127930	145220	39
22	006399	023851	041294	058726	076139	093529	110891	128219	145507	38
23	006690	024141	041585	059016	076429	093819	111180	128507	145795	37
24	006981	024432	041876	059306	076719	094108	111469	128796	146083	36
25	007272	024723	042166	059597	077009	094398	111758	129084	146371	35
26	007563	025014	042457	059887	077299	094687	112047	129373	146659	34
27	007854	025305	042748	060177	077589	094977	112336	129661	146946	33
28	008145	025595	043038	060468	077879	095267	112625	129949	147234	32
29	008436	025886	043329	060758	078169	095556	112914	130238	147522	31
30	008727	026177	043619	061049	078459	095846	113203	130526	147809	30
31	009017	026468	043910	061339	078749	096135	113492	130815	148097	29
32	009308	026759	044201	061629	079039	096425	113781	131103	148385	28
33	009599	027049	044491	061920	079329	096714	114070	131391	148672	27
34	009890	027340	044782	062210	079619	097004	114359	131680	148960	26
35	010181	027631	045072	062500	079909	097293	114648	131968	149248	25
36	010472	027922	045363	062791	080199	097583	114937	132256	149535	24
37	010763	028212	045654	063081	080489	097872	115226	132545	149823	23
38	011054	028503	045944	063371	080779	098162	115515	132833	150111	22
39	011344	028794	046235	063661	081069	098451	115804	133121	150398	21
40	011635	029085	046525	063952	081359	098741	116093	133410	150686	20
41	011926	029375	046816	064242	081649	099030	116382	133698	150973	19
42	012217	029666	047106	064532	081939	099320	116671	133986	151261	18
43	012508	029957	047397	064823	082228	099609	116960	134274	151548	17
44	012799	030248	047688	065113	082518	099899	117249	134563	151836	16
45	013090	030539	047978	065403	082808	100188	117537	134851	152123	15
46	013380	030829	048269	065693	083098	100477	117826	135139	152411	14
47	013671	031120	048559	065984	083388	100767	118115	135427	152698	13
48	013962	031411	048850	066274	083678	101056	118404	135716	152986	12
49	014253	031702	049140	066564	083968	101346	118693	136004	153273	11
50	014544	031992	049431	066854	084258	101635	118982	136292	153561	10
51	014835	032283	049721	067145	084547	101924	119270	136580	153848	9
52	015126	032574	050012	067435	084837	102214	119559	136868	154136	8
53	015416	032864	050302	067725	085127	102503	119848	137156	154423	7
54	015707	033155	050593	068015	085417	102793	120137	137445	154710	6
55	015998	033446	050883	068306	085707	103082	120426	137733	154998	5
56	016289	033737	051174	068596	085997	103371	120714	138021	155285	4
57	016580	034027	051464	068886	086286	103661	121003	138309	155572	3
58	016871	034318	051755	069176	086576	103950	121292	138597	155860	2
59	017162	034609	052045	069466	086866	104239	121581	138885	156147	1
60	017452	034899	052336	069756	087156	104528	121869	139173	156434	0
M.	89°	88°	87°	86°	85°	84°	83°	82°	81°	M.

Natural Co-sines.

M.	9°	10°	11°	12°	13°	14°	15°	16°	17°	M.
0	156434	173648	190809	207912	224951	241922	258819	275637	292372	60
1	156722	173935	191095	208196	225234	242204	259100	275917	292650	59
2	157009	174221	191380	208481	225518	242486	259381	276197	292928	58
3	157296	174508	191666	208765	225801	242769	259662	276476	293206	57
4	157584	174794	191951	209050	226085	243051	259943	276756	293484	56
5	157871	175080	192237	209334	226368	243333	260224	277035	293762	55
6	158158	175367	192522	209619	226651	243615	260505	277315	294040	54
7	158445	175653	192807	209903	226935	243897	260785	277594	294318	53
8	158732	175939	193093	210187	227218	244179	261066	277874	294596	52
9	159020	176226	193378	210472	227501	244461	261347	278153	294874	51
10	159307	176512	193664	210756	227784	244743	261628	278432	295152	50
11	159594	176798	193949	211040	228068	245025	261908	278712	295430	49
12	159881	177085	194234	211325	228351	245307	262189	278991	295708	48
13	160168	177371	194520	211609	228634	245589	262470	279270	295986	47
14	160455	177657	194805	211893	228917	245871	262751	279550	296264	46
15	160743	177944	195090	212178	229200	246153	263031	279829	296542	45
16	161030	178230	195376	212462	229484	246435	263312	280108	296819	44
17	161317	178516	195661	212746	229767	246717	263592	280388	297097	43
18	161604	178802	195946	213030	230050	246999	263873	280667	297375	42
19	161891	179088	196231	213315	230333	247281	264154	280946	297653	41
20	162178	179375	196517	213599	230616	247563	264434	281225	297930	40
21	162465	179661	196802	213883	230899	247845	264715	281504	298208	39
22	162752	179947	197087	214167	231182	248126	264995	281783	298486	38
23	163039	180233	197372	214451	231465	248408	265276	282062	298763	37
24	163326	180519	197657	214735	231748	248690	265556	282341	299041	36
25	163613	180805	197942	215019	232031	248972	265837	282620	299318	35
26	163900	181091	198228	215303	232314	249253	266117	282900	299596	34
27	164187	181377	198513	215588	232597	249535	266397	283179	299873	33
28	164474	181663	198798	215872	232880	249817	266678	283457	300151	32
29	164761	181950	199083	216156	233163	250098	266958	283736	300428	31
30	165048	182236	199368	216440	233445	250380	267238	284015	300706	30
31	165334	182522	199653	216724	233728	250662	267519	284294	300983	29
32	165621	182808	199938	217008	234011	250943	267799	284573	301261	28
33	165908	183094	200223	217292	234294	251225	268079	284852	301538	27
34	166195	183379	200508	217575	234577	251506	268359	285131	301815	26
35	166482	183665	200793	217859	234859	251788	268640	285410	302093	25
36	166769	183951	201078	218143	235142	252069	268920	285688	302370	24
37	167056	184237	201363	218427	235425	252351	269200	285967	302647	23
38	167342	184523	201648	218711	235708	252632	269480	286246	302924	22
39	167629	184809	201933	218995	235990	252914	269760	286525	303202	21
40	167916	185095	202218	219279	236273	253195	270040	286803	303479	20
41	168203	185381	202502	219562	236556	253477	270320	287082	303756	19
42	168489	185667	202787	219846	236838	253758	270600	287361	304033	18
43	168776	185952	203072	220130	237121	254039	270880	287639	304310	17
44	169063	186238	203357	220414	237403	254321	271160	287918	304587	16
45	169350	186524	203642	220697	237686	254602	271440	288196	304864	15
46	169636	186810	203927	220981	237968	254883	271720	288475	305141	14
47	169923	187096	204211	221265	238251	255165	272000	288753	305418	13
48	170209	187381	204496	221548	238533	255446	272280	289032	305695	12
49	170496	187667	204781	221832	238816	255727	272560	289310	305972	11
50	170783	187953	205065	222116	239098	256008	272840	289589	306249	10
51	171069	188238	205350	222399	239381	256289	273120	289867	306526	9
52	171356	188524	205635	222683	239663	256571	273400	290145	306803	8
53	171643	188810	205920	222967	239946	256852	273679	290424	307080	7
54	171929	189095	206204	223250	240228	257133	273959	290702	307357	6
55	172216	189381	206489	223534	240510	257414	274239	290981	307633	5
56	172502	189667	206773	223817	240793	257695	274519	291259	307910	4
57	172789	189952	207058	224101	241075	257976	274798	291537	308187	3
58	173075	190238	207343	224384	241357	258257	275078	291815	308464	2
59	173362	190523	207627	224668	241640	258538	275358	292094	308740	1
60	173648	190809	207912	224951	241922	258819	275637	292372	309017	0
M.	80°	79°	78°	77°	76°	75°	74°	73°	72°	M.

Natural Co-sines.

M.	18°	19°	20°	21°	22°	23°	24°	25°	26°	M.
0	309017	325568	342020	358368	374607	390731	406737	422618	438371	60
1	309294	325843	342293	358640	374876	390999	407002	422882	438633	59
2	309570	326118	342567	358911	375146	391267	407268	423145	438894	58
3	309847	326393	342840	359183	375416	391534	407534	423409	439155	57
4	310123	326668	343113	359454	375685	391802	407799	423673	439417	56
5	310400	326943	343387	359725	375955	392070	408065	423936	439678	55
6	310676	327218	343660	359997	376224	392337	408330	424199	439939	54
7	310953	327493	343933	360268	376494	392605	408596	424463	440200	53
8	311229	327768	344206	360540	376763	392872	408861	424726	440462	52
9	311506	328042	344479	360811	377033	393140	409127	424990	440723	51
10	311782	328317	344752	361082	377302	393407	409392	425253	440984	50
11	312059	328592	345025	361353	377571	393675	409658	425516	441245	49
12	312335	328867	345298	361625	377841	393942	409923	425779	441506	48
13	312611	329141	345571	361896	378110	394209	410188	426042	441767	47
14	312888	329416	345844	362167	378379	394477	410454	426306	442028	46
15	313164	329691	346117	362438	378649	394744	410719	426569	442289	45
16	313440	329965	346390	362709	378918	395011	410984	426832	442550	44
17	313716	330240	346663	362980	379187	395278	411249	427095	442810	43
18	313992	330514	346936	363251	379456	395546	411514	427358	443071	42
19	314269	330789	347208	363522	379725	395813	411779	427621	443332	41
20	314545	331063	347481	363793	379994	396080	412045	427884	443593	40
21	314821	331338	347754	364064	380263	396347	412310	428147	443853	39
22	315097	331612	348027	364335	380532	396614	412575	428410	444114	38
23	315373	331887	348299	364606	380801	396881	412840	428672	444375	37
24	315649	332161	348572	364877	381070	397148	413104	428935	444635	36
25	315925	332435	348845	365148	381339	397415	413369	429198	444896	35
26	316201	332710	349117	365418	381608	397682	413634	429461	445156	34
27	316477	332984	349390	365689	381877	397949	413899	429723	445417	33
28	316753	333258	349662	365960	382146	398215	414164	429986	445677	32
29	317029	333533	349935	366231	382415	398482	414429	430249	445937	31
30	317305	333807	350207	366501	382683	398749	414693	430511	446198	30
31	317580	334081	350480	366772	382952	399016	414958	430774	446458	29
32	317856	334355	350752	367042	383221	399283	415223	431036	446718	28
33	318132	334629	351025	367313	383490	399549	415487	431299	446979	27
34	318408	334903	351297	367584	383758	399816	415752	431561	447239	26
35	318684	335178	351569	367854	384027	400082	416016	431823	447499	25
36	318959	335452	351842	368125	384295	400349	416281	432086	447759	24
37	319235	335726	352114	368395	384564	400616	416545	432348	448019	23
38	319511	336000	352386	368665	384832	400882	416810	432610	448279	22
39	319786	336274	352658	368936	385101	401149	417074	432873	448539	21
40	320062	336547	352931	369206	385369	401415	417338	433135	448799	20
41	320337	336821	353203	369476	385638	401681	417603	433397	449059	19
42	320613	337095	353475	369747	385906	401948	417867	433659	449319	18
43	320889	337369	353747	370017	386174	402214	418131	433921	449579	17
44	321164	337643	354019	370287	386443	402480	418396	434183	449839	16
45	321439	337917	354291	370557	386711	402747	418660	434445	450098	15
46	321715	338190	354563	370828	386979	403013	418924	434707	450358	14
47	321990	338464	354835	371098	387247	403279	419188	434969	450618	13
48	322266	338738	355107	371368	387516	403545	419452	435231	450878	12
49	322541	339012	355379	371638	387784	403811	419716	435493	451137	11
50	322816	339285	355651	371908	388052	404078	419980	435755	451397	10
51	323092	339559	355923	372178	388320	404344	420244	436017	451656	9
52	323367	339832	356194	372448	388588	404610	420508	436278	451916	8
53	323642	340106	356466	372718	388856	404876	420772	436540	452175	7
54	323917	340380	356738	372988	389124	405142	421036	436802	452435	6
55	324193	340653	357010	373258	389392	405408	421300	437063	452694	5
56	324468	340927	357281	373528	389660	405673	421563	437325	452953	4
57	324743	341200	357553	373797	389928	405939	421827	437587	453213	3
58	325018	341473	357825	374067	390196	406205	422091	437848	453472	2
59	325293	341747	358096	374337	390463	406471	422355	438110	453731	1
60	325568	342020	358368	374607	390731	406737	422618	438371	453990	0
M.	71°	70°	69°	68°	67°	66°	65°	64°	63°	M.

Natural Co-sines.

M.	27°	28°	29°	30°	31°	32°	33°	34°	35°	M.
0	453990	469472	484810	500000	515038	529919	544639	559193	573576	60
1	454250	469728	485064	500252	515287	530166	544883	559434	573815	59
2	454509	469985	485318	500504	515537	530413	545127	559675	574053	58
3	454768	470242	485573	500756	515786	530659	545371	559916	574291	57
4	455027	470499	485827	501007	516035	530906	545615	560157	574529	56
5	455286	470755	486081	501259	516284	531152	545858	560398	574767	55
6	455545	471012	486335	501511	516533	531399	546102	560639	575005	54
7	455804	471268	486590	501762	516782	531645	546346	560880	575243	53
8	456063	471525	486844	502014	517031	531891	546589	561121	575481	52
9	456322	471782	487098	502266	517280	532138	546833	561361	575719	51
10	456580	472038	487352	502517	517529	532384	547076	561602	575957	50
11	456839	472294	487606	502769	517778	532630	547320	561843	576195	49
12	457098	472551	487860	503020	518027	532876	547563	562083	576432	48
13	457357	472807	488114	503271	518276	533122	547807	562324	576670	47
14	457615	473063	488367	503523	518525	533368	548050	562564	576908	46
15	457874	473320	488621	503774	518773	533615	548293	562805	577145	45
16	458133	473576	488875	504025	519022	533861	548536	563045	577383	44
17	458391	473832	489129	504276	519271	534106	548780	563286	577620	43
18	458650	474088	489382	504528	519519	534352	549023	563526	577858	42
19	458908	474344	489636	504779	519768	534598	549266	563766	578095	41
20	459166	474600	489890	505030	520016	534844	549509	564007	578332	40
21	459425	474856	490143	505281	520265	535090	549752	564247	578570	39
22	459683	475112	490397	505532	520513	535335	549995	564487	578807	38
23	459942	475368	490650	505783	520761	535581	550238	564727	579044	37
24	460200	475624	490904	506034	521010	535827	550481	564967	579281	36
25	460458	475880	491157	506285	521258	536072	550724	565207	579518	35
26	460716	476136	491411	506535	521506	536318	550966	565447	579755	34
27	460974	476392	491664	506786	521754	536563	551209	565687	579992	33
28	461232	476647	491917	507037	522002	536809	551452	565927	580229	32
29	461491	476903	492170	507288	522251	537054	551694	566166	580466	31
30	461749	477159	492424	507538	522499	537300	551937	566406	580703	30
31	462007	477414	492677	507789	522747	537545	552180	566646	580940	29
32	462265	477670	492930	508040	522995	537790	552422	566886	581176	28
33	462523	477925	493183	508290	523242	538035	552664	567125	581413	27
34	462780	478181	493436	508541	523490	538281	552907	567365	581650	26
35	463038	478436	493689	508791	523738	538526	553149	567604	581886	25
36	463296	478692	493942	509041	523986	538771	553392	567844	582123	24
37	463554	478947	494195	509292	524234	539016	553634	568083	582359	23
38	463812	479203	494448	509542	524481	539261	553876	568323	582596	22
39	464069	479458	494700	509792	524729	539506	554118	568562	582832	21
40	464327	479713	494953	510043	524977	539751	554360	568801	583069	20
41	464584	479968	495206	510293	525224	539996	554602	569040	583305	19
42	464842	480223	495459	510543	525472	540240	554844	569280	583541	18
43	465100	480479	495711	510793	525719	540485	555086	569519	583777	17
44	465357	480734	495964	511043	525967	540730	555328	569758	584014	16
45	465615	480989	496217	511293	526214	540974	555570	569997	584250	15
46	465872	481244	496469	511543	526461	541219	555812	570236	584486	14
47	466129	481499	496722	511793	526709	541464	556054	570475	584722	13
48	466387	481754	496974	512043	526956	541708	556296	570714	584958	12
49	466644	482009	497226	512293	527203	541953	556537	570952	585194	11
50	466901	482263	497479	512543	527450	542197	556779	571191	585429	10
51	467158	482518	497731	512792	527697	542442	557021	571430	585665	9
52	467416	482773	497983	513042	527944	542686	557262	571669	585901	8
53	467673	483028	498236	513292	528191	542930	557504	571907	586137	7
54	467930	483282	498488	513541	528438	543174	557745	572146	586372	6
55	468187	483537	498740	513791	528685	543419	557987	572384	586608	5
56	468444	483792	498992	514040	528932	543663	558228	572623	586844	4
57	468701	484046	499244	514290	529179	543907	558469	572861	587079	3
58	468958	484301	499496	514539	529426	544151	558710	573100	587314	2
59	469215	484555	499748	514789	529673	544395	558952	573338	587550	1
60	469472	484810	500000	515038	529919	544639	559193	573576	587785	0
M.	*62°*	*61°*	*60°*	*59°*	*58°*	*57°*	*56°*	*55°*	*54°*	M.

Natural Co-sines.

M.	36°	37°	38°	39°	40°	41°	42°	43°	44°	M.
0	587785	601815	615661	629320	642788	656059	669131	681998	694658	60
1	588021	602047	615891	629546	643010	656279	669347	682211	694868	59
2	588256	602280	616120	629772	643233	656498	669563	682424	695077	58
3	588491	602512	616349	629998	643456	656717	669779	682636	695286	57
4	588726	602744	616578	630224	643679	656937	669995	682849	695495	56
5	588961	602976	616807	630450	643901	657156	670211	683061	695704	55
6	589196	603208	617036	630676	644124	657375	670427	683274	695913	54
7	589431	603440	617265	630902	644346	657594	670642	683486	696122	53
8	589666	603672	617494	631127	644569	657814	670858	683698	696330	52
9	589901	603904	617722	631353	644791	658033	671074	683911	696539	51
10	590136	604136	617951	631578	645013	658252	671289	684123	696748	50
11	590371	604367	618180	631804	645236	658471	671505	684335	696957	49
12	590606	604599	618408	632029	645458	658689	671721	684547	697165	48
13	590840	604831	618637	632255	645680	658908	671936	684759	697374	47
14	591075	605062	618865	632480	645902	659127	672151	684971	697582	46
15	591310	605294	619094	632705	646124	659346	672367	685183	697790	45
16	591544	605526	619322	632931	646346	659565	672582	685395	697999	44
17	591779	605757	619551	633156	646568	659783	672797	685607	698207	43
18	592013	605988	619779	633381	646790	660002	673013	685818	698415	42
19	592248	606220	620007	633606	647012	660220	673228	686030	698623	41
20	592482	606451	620235	633831	647233	660439	673443	686242	698832	40
21	592716	606682	620464	634056	647455	660657	673658	686453	699040	39
22	592951	606914	620692	634281	647677	660875	673873	686665	699248	38
23	593185	607145	620920	634506	647898	661094	674088	686876	699455	37
24	593419	607376	621148	634731	648120	661312	674302	687088	699663	36
25	593653	607607	621376	634955	648341	661530	674517	687299	699871	35
26	593887	607838	621604	635180	648563	661748	674732	687510	700079	34
27	594121	608069	621831	635405	648784	661966	674947	687721	700287	33
28	594355	608300	622059	635629	649006	662184	675161	687932	700494	32
29	594589	608531	622287	635854	649227	662402	675376	688144	700702	31
30	594823	608761	622515	636078	649448	662620	675590	688355	700909	30
31	595057	608992	622742	636303	649669	662838	675805	688566	701117	29
32	595290	609223	622970	636527	649890	663056	676019	688776	701324	28
33	595524	609454	623197	636751	650111	663273	676233	688987	701531	27
34	595758	609684	623425	636976	650332	663491	676448	689198	701739	26
35	595991	609915	623652	637200	650553	663709	676662	689409	701946	25
36	596225	610145	623880	637424	650774	663926	676876	689620	702153	24
37	596458	610376	624107	637648	650995	664144	677090	689830	702360	23
38	596692	610606	624334	637872	651216	664361	677304	690041	702567	22
39	596925	610836	624561	638096	651437	664579	677518	690251	702774	21
40	597159	611067	624789	638320	651657	664796	677732	690462	702981	20
41	597392	611297	625016	638544	651878	665013	677946	690672	703188	19
42	597625	611527	625243	638768	652098	665230	678160	690882	703395	18
43	597858	611757	625470	638992	652319	665448	678373	691093	703601	17
44	598092	611987	625697	639215	652539	665665	678587	691303	703808	16
45	598325	612217	625923	639439	652760	665882	678801	691513	704015	15
46	598558	612447	626150	639663	652980	666099	679014	691723	704221	14
47	598791	612677	626377	639886	653200	666316	679228	691933	704428	13
48	599024	612907	626604	640110	653421	666532	679441	692143	704634	12
49	599256	613137	626830	640333	653641	666749	679655	692353	704841	11
50	599489	613367	627057	640557	653861	666966	679868	692563	705047	10
51	599722	613596	627284	640780	654081	667183	680081	692773	705253	9
52	599955	613826	627510	641003	654301	667399	680295	692983	705459	8
53	600188	614056	627737	641226	654521	667616	680508	693192	705665	7
54	600420	614285	627963	641450	654741	667833	680721	693402	705872	6
55	600653	614515	628189	641673	654961	668049	680934	693611	706078	5
56	600885	614744	628416	641896	655180	668265	681147	693821	706284	4
57	601118	614974	628642	642119	655400	668482	681360	694030	706489	3
58	601350	615203	628868	642342	655620	668698	681573	694240	706695	2
59	*601583*	615432	629094	642565	655839	668914	681786	694449	706901	1
60	*601815*	*615661*	629320	642788	656059	669131	681998	694658	707107	0
M.	*53°*	*52°*	*51°*	*50°*	*49°*	*48°*	*47°*	*46°*	*45°*	M.

Natural Co-sines.

M.	45°	46°	47°	48°	49°	50°	51°	52°	53°	M.
0	707107	719340	731354	743145	754710	766044	777146	788011	798636	60
1	707312	719542	731552	743339	754900	766231	777329	788190	798811	59
2	707518	719744	731750	743534	755091	766418	777512	788369	798985	58
3	707724	719946	731949	743728	755282	766605	777695	788548	799160	57
4	707929	720148	732147	743923	755472	766792	777878	788727	799335	56
5	708134	720349	732345	744117	755663	766979	778060	788905	799510	55
6	708340	720551	732543	744312	755853	767165	778243	789084	799685	54
7	708545	720753	732741	744506	756044	767352	778426	789263	799859	53
8	708750	720954	732939	744700	756234	767538	778608	789441	800034	52
9	708956	721156	733137	744894	756425	767725	778791	789620	800208	51
10	709161	721357	733334	745088	756615	767911	778973	789798	800383	50
11	709366	721559	733532	745282	756805	768097	779156	789977	800557	49
12	709571	721760	733730	745476	756995	768284	779338	790155	800731	48
13	709776	721962	733927	745670	757185	768470	779520	790333	800906	47
14	709981	722163	734125	745864	757375	768656	779702	790511	801080	46
15	710185	722364	734323	746057	757565	768842	779884	790690	801254	45
16	710390	722565	734520	746251	757755	769028	780067	790868	801428	44
17	710595	722766	734717	746445	757945	769214	780249	791046	801602	43
18	710799	722967	734915	746638	758134	769400	780430	791224	801776	42
19	711004	723168	735112	746832	758324	769585	780612	791401	801949	41
20	711209	723369	735309	747025	758514	769771	780794	791579	802123	40
21	711413	723570	735506	747218	758703	769957	780976	791757	802297	39
22	711617	723771	735703	747412	758893	770142	781157	791935	802470	38
23	711822	723971	735900	747605	759082	770328	781339	792112	802644	37
24	712026	724172	736097	747798	759271	770513	781520	792290	802817	36
25	712230	724372	736294	747991	759461	770699	781702	792467	802991	35
26	712434	724573	736491	748184	759650	770884	781883	792644	803164	34
27	712639	724773	736687	748377	759839	771069	782065	792822	803337	33
28	712843	724974	736884	748570	760028	771254	782246	792999	803511	32
29	713047	725174	737081	748763	760217	771440	782427	793176	803684	31
30	713250	725374	737277	748956	760406	771625	782608	793353	803857	30
31	713454	725575	737474	749148	760595	771810	782789	793530	804030	29
32	713658	725775	737670	749341	760784	771995	782970	793707	804203	28
33	713862	725975	737867	749534	760972	772179	783151	793884	804376	27
34	714066	726175	738063	749726	761161	772364	783332	794061	804548	26
35	714269	726375	738259	749919	761350	772549	783513	794238	804721	25
36	714473	726575	738455	750111	761538	772734	783693	794415	804894	24
37	714676	726775	738651	750303	761727	772918	783874	794591	805066	23
38	714880	726974	738848	750496	761915	773103	784055	794768	805239	22
39	715083	727174	739043	750688	762104	773287	784235	794944	805411	21
40	715286	727374	739239	750880	762292	773472	784416	795121	805584	20
41	715490	727573	739435	751072	762480	773656	784596	795297	805756	19
42	715693	727773	739631	751264	762668	773840	784776	795473	805928	18
43	715896	727972	739827	751456	762856	774024	784957	795650	806100	17
44	716099	728172	740023	751648	763044	774209	785137	795826	806273	16
45	716302	728371	740218	751840	763232	774393	785317	796002	806445	15
46	716505	728570	740414	752032	763420	774577	785497	796178	806617	14
47	716708	728769	740609	752223	763608	774761	785677	796354	806788	13
48	716911	728969	740805	752415	763796	774944	785857	796530	806960	12
49	717113	729168	741000	752606	763984	775128	786037	796706	807132	11
50	717316	729367	741195	752798	764171	775312	786217	796882	807304	10
51	717519	729566	741391	752989	764359	775496	786396	797057	807475	9
52	717721	729765	741586	753181	764547	775679	786576	797233	807647	8
53	717924	729963	741781	753372	764734	775863	786756	797408	807818	7
54	718126	730162	741976	753563	764921	776046	786935	797584	807990	6
55	718329	730361	742171	753755	765109	776230	787114	797759	808161	5
56	718531	730560	742366	753946	765296	776413	787294	797935	808333	4
57	718733	730758	742561	754137	765483	776596	787473	798110	808504	3
58	718936	730957	742755	754328	765670	776780	787652	798285	808675	2
59	719138	731155	742950	754519	765857	776963	787832	798460	808846	1
60	719340	731354	743145	754710	766044	777146	788011	798636	809017	0
M.	*44°*	*43°*	*42°*	*41°*	*40°*	*39°*	*38°*	*37°*	*36°*	*M.*

Natural Co-sines.

M.	54°	55°	56°	57°	58°	59°	60°	61°	62°	M.
0	809017	819152	829038	838671	848048	857167	866025	874620	882948	60
1	809188	819319	829200	838829	848202	857317	866171	874761	883084	59
2	809359	819486	829363	838987	848356	857467	866316	874902	883221	58
3	809530	819652	829525	839146	848510	857616	866461	875042	883357	57
4	809700	819819	829688	839304	848664	857766	866607	875183	883493	56
5	809871	819985	829850	839462	848818	857915	866752	875324	883629	55
6	810042	820152	830012	839620	848972	858065	866897	875465	883766	54
7	810212	820318	830174	839778	849125	858214	867042	875605	883902	53
8	810383	820485	830337	839936	849279	858364	867187	875746	884038	52
9	810553	820651	830499	840094	849433	858513	867331	875886	884174	51
10	810723	820817	830661	840251	849586	858662	867476	876026	884309	50
11	810894	820983	830823	840409	849739	858811	867621	876167	884445	49
12	811064	821149	830984	840567	849893	858960	867765	876307	884581	48
13	811234	821315	831146	840724	850046	859109	867910	876447	884717	47
14	811404	821481	831308	840882	850199	859258	868054	876587	884852	46
15	811574	821647	831470	841039	850352	859406	868199	876727	884988	45
16	811744	821813	831631	841196	850505	859555	868343	876867	885123	44
17	811914	821978	831793	841354	850658	859704	868487	877006	885258	43
18	812084	822144	831954	841511	850811	859852	868632	877146	885394	42
19	812253	822310	832115	841668	850964	860001	868776	877286	885529	41
20	812423	822475	832277	841825	851117	860149	868920	877425	885664	40
21	812592	822641	832438	841982	851269	860297	869064	877565	885799	39
22	812762	822806	832599	842139	851422	860446	869207	877704	885934	38
23	812931	822971	832760	842296	851575	860594	869351	877844	886069	37
24	813101	823136	832921	842452	851727	860742	869495	877983	886204	36
25	813270	823302	833082	842609	851879	860890	869639	878122	886338	35
26	813439	823467	833243	842766	852032	861038	869782	878261	886473	34
27	813608	823632	833404	842922	852184	861186	869926	878400	886608	33
28	813778	823797	833565	843079	852336	861334	870069	878539	886742	32
29	813947	823961	833725	843235	852488	861481	870212	878678	886876	31
30	814116	824126	833886	843391	852640	861629	870356	878817	887011	30
31	814284	824291	834046	843548	852792	861777	870499	878956	887145	29
32	814453	824456	834207	843704	852944	861924	870642	879095	887279	28
33	814622	824620	834367	843860	853096	862072	870785	879233	887413	27
34	814791	824785	834527	844016	853248	862219	870928	879372	887548	26
35	814959	824949	834688	844172	853399	862366	871071	879510	887681	25
36	815128	825113	834848	844328	853551	862514	871214	879649	887815	24
37	815296	825278	835008	844484	853702	862661	871357	879787	887949	23
38	815465	825442	835168	844640	853854	862808	871499	879925	888083	22
39	815633	825606	835328	844795	854005	862955	871642	880063	888217	21
40	815801	825770	835488	844951	854156	863102	871784	880201	888350	20
41	815969	825934	835648	845106	854308	863249	871927	880339	888484	19
42	816138	826098	835807	845262	854459	863396	872069	880477	888617	18
43	816306	826262	835967	845417	854610	863542	872212	880615	888751	17
44	816474	826426	836127	845573	854761	863689	872354	880753	888884	16
45	816642	826590	836286	845728	854912	863836	872496	880891	889017	15
46	816809	826753	836446	845883	855063	863982	872638	881028	889150	14
47	816977	826917	836605	846038	855214	864128	872780	881166	889283	13
48	817145	827081	836764	846193	855364	864275	872922	881303	889416	12
49	817313	827244	836924	846348	855515	864421	873064	881441	889549	11
50	817480	827407	837083	846503	855665	864567	873206	881578	889682	10
51	817648	827571	837242	846658	855816	864713	873347	881716	889815	9
52	817815	827734	837401	846813	855966	864860	873489	881853	889948	8
53	817982	827897	837560	846967	856117	865006	873631	881990	890080	7
54	818150	828060	837719	847122	856267	865151	873772	882127	890213	6
55	818317	828223	837878	847277	856417	865297	873914	882264	890345	5
56	818484	828386	838036	847431	856567	865443	874055	882401	890478	4
57	818651	828549	838195	847585	856718	865589	874196	882538	890610	3
58	818818	828712	838354	847740	856868	865734	874338	882674	890742	2
59	818985	828875	838512	847894	857017	865880	874479	882811	890874	1
60	819152	829038	838671	848048	857167	866025	874620	882948	891007	0
M.	35°	34°	33°	32°	31°	30°	29°	28°	27°	M.

Natural Co-sines.

M.	63°	64°	65°	66°	67°	68°	69°	70°	71°	M.
0	891007	898794	906308	913545	920505	927184	933580	939693	945519	60
1	891139	898922	906431	913664	920618	927293	933685	939792	945613	59
2	891270	899049	906554	913782	920732	927402	933789	939891	945708	58
3	891402	899176	906676	913900	920846	927510	933893	939991	945802	57
4	891534	899304	906799	914018	920959	927619	933997	940090	945897	56
5	891666	899431	906922	914136	921072	927728	934101	940189	945991	55
6	891798	899558	907044	914254	921185	927836	934204	940288	946085	54
7	891929	899685	907166	914372	921299	927945	934308	940387	946180	53
8	892061	899812	907289	914490	921412	928053	934412	940486	946274	52
9	892192	899939	907411	914607	921525	928161	934515	940585	946368	51
10	892323	900065	907533	914725	921638	928270	934619	940684	946462	50
11	892455	900192	907655	914842	921750	928378	934722	940782	946555	49
12	892586	900319	907777	914960	921863	928486	934826	940881	946649	48
13	892717	900445	907899	915077	921976	928594	934929	940979	946743	47
14	892848	900572	908021	915194	922088	928702	935032	941078	946837	46
15	892979	900698	908143	915311	922201	928810	935135	941176	946930	45
16	893110	900825	908265	915429	922313	928917	935238	941274	947024	44
17	893241	900951	908387	915546	922426	929025	935341	941372	947117	43
18	893371	901077	908508	915663	922538	929133	935444	941471	947210	42
19	893502	901203	908630	915779	922650	929240	935547	941569	947304	41
20	893633	901329	908751	915896	922762	929348	935650	941666	947397	40
21	893763	901455	908872	916013	922874	929455	935752	941764	947490	39
22	893894	901581	908994	916130	922986	929562	935855	941862	947583	38
23	894024	901707	909115	916246	923098	929669	935957	941960	947676	37
24	894154	901833	909236	916363	923210	929776	936060	942057	947768	36
25	894284	901958	909357	916479	923322	929884	936162	942155	947861	35
26	894415	902084	909478	916595	923434	929990	936264	942252	947954	34
27	894545	902209	909599	916712	923545	930097	936366	942350	948046	33
28	894675	902335	909720	916828	923657	930204	936468	942447	948139	32
29	894805	902460	909841	916944	923768	930311	936570	942544	948231	31
30	894934	902585	909961	917060	923880	930418	936672	942641	948324	30
31	895064	902710	910082	917176	923991	930524	936774	942739	948416	29
32	895194	902836	910202	917292	924102	930631	936876	942836	948508	28
33	895323	902961	910323	917408	924213	930737	936977	942932	948600	27
34	895453	903086	910443	917523	924324	930843	937079	943029	948692	26
35	895582	903210	910563	917639	924435	930950	937181	943126	948784	25
36	895712	903335	910684	917755	924546	931056	937282	943223	948876	24
37	895841	903460	910804	917870	924657	931162	937383	943319	948968	23
38	895970	903585	910924	917986	924768	931268	937485	943416	949059	22
39	896099	903709	911044	918101	924878	931374	937586	943512	949151	21
40	896229	903834	911164	918216	924989	931480	937687	943609	949243	20
41	896358	903958	911284	918331	925099	931586	937788	943705	949334	19
42	896486	904083	911403	918446	925210	931691	937889	943801	949425	18
43	896615	904207	911523	918561	925320	931797	937990	943897	949517	17
44	896744	904331	911643	918676	925430	931902	938091	943993	949608	16
45	896873	904455	911762	918791	925541	932008	938191	944089	949699	15
46	897001	904579	911881	918906	925651	932113	938292	944185	949790	14
47	897130	904703	912001	919021	925761	932219	938393	944281	949881	13
48	897258	904827	912120	919135	925871	932324	938493	944376	949972	12
49	897387	904951	912239	919250	925980	932429	938593	944472	950063	11
50	897515	905075	912358	919364	926090	932534	938694	944568	950154	10
51	897643	905198	912477	919479	926200	932639	938794	944663	950244	9
52	897771	905322	912596	919593	926310	932744	938894	944758	950335	8
53	897900	905445	912715	919707	926419	932849	938994	944854	950425	7
54	898028	905569	912834	919821	926529	932954	939094	944949	950516	6
55	898156	905692	912953	919936	926638	933058	939194	945044	950606	5
56	898283	905815	913072	920050	926747	933163	939294	945139	950696	4
57	898411	905939	913190	920164	926857	933267	939394	945234	950786	3
58	898539	906062	913309	920277	926966	933372	939493	945329	950877	2
59	898666	906185	913427	920391	927075	933476	939593	945424	950967	1
60	898794	906308	913545	920505	927184	933580	939693	945519	951057	0
M.	26°	25°	24°	23°	22°	21°	20°	19°	18°	M.

Natural Co-sines.

M.	72°	73°	74°	75°	76°	77°	78°	79°	80°	M.
0	951057	956305	961262	965926	970296	974370	978148	981627	984808	60
1	951146	956390	961342	966001	970366	974435	978208	981683	984858	59
2	951236	956475	961422	966076	970436	974501	978268	981738	984909	58
3	951326	956560	961502	966151	970506	974566	978329	981793	984959	57
4	951415	956644	961582	966226	970577	974631	978389	981849	985009	56
5	951505	956729	961662	966301	970647	974696	978449	981904	985059	55
6	951594	956814	961741	966376	970716	974761	978509	981959	985109	54
7	951684	956898	961821	966451	970786	974826	978569	982014	985159	53
8	951773	956983	961901	966526	970856	974891	978629	982069	985209	52
9	951862	957067	961980	966600	970926	974956	978689	982123	985259	51
10	951951	957151	962059	966675	970995	975020	978748	982178	985309	50
11	952040	957235	962139	966749	971065	975085	978808	982233	985358	49
12	952129	957319	962218	966823	971134	975149	978867	982287	985408	48
13	952218	957404	962297	966898	971204	975214	978927	982342	985457	47
14	952307	957487	962376	966972	971273	975278	978986	982396	985507	46
15	952396	957571	962455	967046	971342	975342	979045	982450	985556	45
16	952484	957655	962534	967120	971411	975406	979105	982505	985605	44
17	952573	957739	962613	967194	971480	975471	979164	982559	985654	43
18	952661	957822	962692	967268	971549	975535	979223	982613	985703	42
19	952750	957906	962770	967342	971618	975598	979282	982667	985752	41
20	952838	957990	962849	967415	971687	975662	979341	982721	985801	40
21	952926	958073	962928	967489	971755	975726	979399	982774	985850	39
22	953015	958156	963006	967562	971824	975790	979458	982828	985899	38
23	953103	958239	963084	967636	971893	975853	979517	982882	985947	37
24	953191	958323	963163	967709	971961	975917	979575	982935	985996	36
25	953279	958406	963241	967782	972029	975980	979634	982989	986045	35
26	953366	958489	963319	967856	972098	976044	979692	983042	986093	34
27	953454	958572	963397	967929	972166	976107	979750	983096	986141	33
28	953542	958654	963475	968002	972234	976170	979809	983149	986189	32
29	953629	958737	963553	968075	972302	976233	979867	983202	986238	31
30	953717	958820	963630	968148	972370	976296	979925	983255	986286	30
31	953804	958902	963708	968220	972438	976359	979983	983308	986334	29
32	953892	958985	963786	968293	972506	976422	980041	983361	986381	28
33	953979	959067	963863	968366	972573	976485	980098	983414	986429	27
34	954066	959150	963941	968438	972641	976547	980156	983466	986477	26
35	954153	959232	964018	968511	972708	976610	980214	983519	986525	25
36	954240	959314	964095	968583	972776	976672	980271	983571	986572	24
37	954327	959396	964173	968656	972843	976735	980329	983624	986620	23
38	954414	959478	964250	968728	972911	976797	980386	983676	986667	22
39	954501	959560	964327	968800	972978	976859	980443	983729	986714	21
40	954588	959642	964404	968872	973045	976921	980500	983781	986762	20
41	954674	959724	964481	968944	973112	976984	980558	983833	986809	19
42	954761	959805	964557	969016	973179	977046	980615	983885	986856	18
43	954847	959887	964634	969088	973246	977108	980672	983937	986903	17
44	954934	959968	964711	969159	973313	977169	980728	983989	986950	16
45	955020	960050	964787	969231	973379	977231	980785	984041	986996	15
46	955106	960131	964864	969302	973446	977293	980842	984092	987043	14
47	955192	960212	964940	969374	973512	977354	980899	984144	987090	13
48	955278	960294	965016	969445	973579	977416	980955	984196	987136	12
49	955364	960375	965093	969517	973645	977477	981012	984247	987183	11
50	955450	960456	965169	969588	973712	977539	981068	984298	987229	10
51	955536	960537	965245	969659	973778	977600	981124	984350	987275	9
52	955622	960618	965321	969730	973844	977661	981181	984401	987322	8
53	955707	960698	965397	969801	973910	977722	981237	984452	987368	7
54	955793	960779	965473	969872	973976	977783	981293	984503	987414	6
55	955879	960860	965548	969943	974042	977844	981349	984554	987460	5
56	955964	960940	965624	970014	974108	977905	981405	984605	987506	4
57	956049	961021	965700	970084	974173	977965	981460	984656	987551	3
58	956134	961101	965775	970155	974239	978026	981516	984707	987597	2
59	956220	961181	965850	970225	974305	978087	981572	984757	987643	1
60	956305	961262	965926	970296	974370	978148	981627	984808	987688	0
M.	17°	16°	15°	14°	13°	12°	11°	10°	9°	M.

Natural Co-sines.

M.	81°	82°	83°	84°	85°	86°	87°	88°	89°	M.
0	987688	990268	992546	994522	996195	997564	998630	999391	999848	60
1	987734	990309	992582	994552	996220	997584	998645	999401	999853	59
2	987779	990349	992617	994583	996245	997604	998660	999411	999858	58
3	987824	990389	992652	994613	996270	997625	998675	999421	999863	57
4	987870	990429	992687	994643	996295	997645	998690	999431	999867	56
5	987915	990469	992722	994673	996320	997664	998705	999441	999872	55
6	987960	990509	992757	994703	996345	997684	998719	999450	999877	54
7	988005	990549	992792	994733	996370	997704	998734	999460	999881	53
8	988050	990589	992827	994762	996395	997724	998749	999469	999886	52
9	988094	990629	992862	994792	996419	997743	998763	999479	999890	51
10	988139	990669	992896	994822	996444	997763	998778	999488	999894	50
11	988184	990708	992931	994851	996468	997782	998792	999497	999898	49
12	988228	990748	992966	994881	996493	997801	998806	999507	999903	48
13	988273	990787	993000	994910	996517	997821	998820	999516	999907	47
14	988317	990827	993034	994939	996541	997840	998834	999525	999910	46
15	988362	990866	993068	994969	996566	997859	998848	999534	999914	45
16	988406	990905	993103	994998	996590	997878	998862	999542	999918	44
17	988450	990944	993137	995027	996614	997897	998876	999551	999922	43
18	988494	990983	993171	995056	996637	997916	998890	999560	999925	42
19	988538	991022	993205	995084	996661	997934	998904	999568	999929	41
20	988582	991061	993238	995113	996685	997953	998917	999577	999932	40
21	988626	991100	993272	995142	996709	997972	998931	999585	999936	39
22	988669	991138	993306	995170	996732	997990	998944	999594	999939	38
23	988713	991177	993339	995199	996756	998008	998957	999602	999942	37
24	988756	991216	993373	995227	996779	998027	998971	999610	999945	36
25	988800	991254	993406	995256	996802	998045	998984	999618	999948	35
26	988843	991292	993439	995284	996825	998063	998997	999626	999951	34
27	988886	991331	993473	995312	996848	998081	999010	999634	999954	33
28	988930	991369	993506	995340	996872	998099	999023	999642	999957	32
29	988973	991407	993539	995368	996894	998117	999035	999650	999959	31
30	989016	991445	993572	995396	996917	998135	999048	999657	999962	30
31	989059	991483	993605	995424	996940	998153	999061	999665	999964	29
32	989102	991521	993638	995452	996963	998170	999073	999672	999967	28
33	989145	991558	993670	995479	996985	998188	999086	999680	999969	27
34	989187	991596	993703	995507	997008	998205	999098	999687	999971	26
35	989230	991634	993735	995535	997030	998223	999111	999694	999974	25
36	989272	991671	993768	995562	997053	998240	999123	999701	999976	24
37	989315	991709	993800	995589	997075	998257	999135	999709	999978	23
38	989357	991746	993833	995617	997097	998274	999147	999716	999980	22
39	989399	991783	993865	995644	997119	998291	999159	999722	999981	21
40	989442	991820	993897	995671	997141	998308	999171	999729	999983	20
41	989484	991857	993929	995698	997163	998325	999183	999736	999985	19
42	989526	991894	993961	995725	997185	998342	999194	999743	999986	18
43	989568	991931	993993	995752	997207	998359	999206	999749	999988	17
44	989610	991968	994025	995778	997229	998375	999218	999756	999989	16
45	989651	992005	994056	995805	997250	998392	999229	999762	999990	15
46	989693	992042	994088	995832	997272	998408	999240	999768	999992	14
47	989735	992078	994120	995858	997293	998425	999252	999775	999993	13
48	989776	992115	994151	995884	997314	998441	999263	999781	999994	12
49	989818	992151	994182	995911	997336	998457	999274	999787	999995	11
50	989859	992187	994214	995937	997357	998473	999285	999793	999996	10
51	989900	992224	994245	995963	997378	998489	999296	999799	999997	9
52	989942	992260	994276	995989	997399	998505	999307	999804	999997	8
53	989983	992296	994307	996015	997420	998521	999318	999810	999998	7
54	990024	992332	994338	996041	997441	998537	999328	999816	999998	6
55	990065	992368	994369	996067	997462	998552	999339	999821	999999	5
56	990105	992404	994400	996093	997482	998568	999350	999827	999999	4
57	990146	992439	994430	996118	997503	998583	999360	999832	1000000	3
58	990187	992475	994461	996144	997523	998599	999370	999837	1000000	2
59	990228	992511	994491	996169	997544	998614	999381	999843	1000000	1
60	990268	992546	994522	996195	997564	998630	999391	999848	1000000	0
M.	8°	7°	6°	5°	4°	3°	2°	1°	0°	M.

Natural Co-sines.

TABLE V.

TRAVERSE TABLES (POINTS).

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.0	61	60.9	03.0	121	120.9	05.9	181	180.8	08.9	241	240.7	11.8
2	02.0	00.1	62	61.9	03.0	122	121.9	06.0	182	181.8	08.9	242	241.7	11.9
3	03.0	00.1	63	62.9	03.1	123	122.9	06.0	183	182.8	09.0	243	242.7	11.9
4	04.0	00.2	64	63.9	03.1	124	123.9	06.1	184	183.8	09.0	244	243.7	12.0
5	05.0	00.2	65	64.9	03.2	125	124.9	06.1	185	184.8	09.1	245	244.7	12.0
6	06.0	00.3	66	65.9	03.2	126	125.8	06.2	186	185.8	09.1	246	245.7	12.1
7	07.0	00.3	67	66.9	03.3	127	126.8	06.2	187	186.8	09.2	247	246.7	12.1
8	08.0	00.4	68	67.9	03.3	128	127.8	06.3	188	187.8	09.2	248	247.7	12.2
9	09.0	00.4	69	68.9	03.4	129	128.8	06.3	189	188.8	09.3	249	248.7	12.2
10	10.0	00.5	70	69.9	03.4	130	129.8	06.4	190	189.8	09.3	250	249.7	12.3
11	11.0	00.5	71	70.9	03.5	131	130.8	06.4	191	190.8	09.4	251	250.7	12.3
12	12.0	00.6	72	71.9	03.5	132	131.8	06.5	192	191.8	09.4	252	251.7	12.4
13	13.0	00.6	73	72.9	03.6	133	132.8	06.5	193	192.8	09.5	253	252.7	12.4
14	14.0	00.7	74	73.9	03.6	134	133.8	06.6	194	193.8	09.5	254	253.7	12.5
15	15.0	00.7	75	74.9	03.7	135	134.8	06.6	195	194.8	09.6	255	254.7	12.5
16	16.0	00.8	76	75.9	03.7	136	135.8	06.7	196	195.8	09.6	256	255.7	12.6
17	17.0	00.8	77	76.9	03.8	137	136.8	06.7	197	196.8	09.7	257	256.7	12.6
18	18.0	00.9	78	77.9	03.8	138	137.8	06.8	198	197.8	09.7	258	257.7	12.7
19	19.0	00.9	79	78.9	03.9	139	138.8	06.8	199	198.8	09.8	259	258.7	12.7
20	20.0	01.0	80	79.9	03.9	140	139.8	06.9	200	199.8	09.8	260	259.7	12.8
21	21.0	01.0	81	80.9	04.0	141	140.8	06.9	201	200.8	09.9	261	260.7	12.8
22	22.0	01.1	82	81.9	04.0	142	141.8	07.0	202	201.8	09.9	262	261.7	12.9
23	23.0	01.1	83	82.9	04.1	143	142.8	07.0	203	202.8	10.0	263	262.7	12.9
24	24.0	01.2	84	83.9	04.1	144	143.8	07.1	204	203.8	10.0	264	263.7	13.0
25	25.0	01.2	85	84.9	04.2	145	144.8	07.1	205	204.8	10.1	265	264.7	13.0
26	26.0	01.3	86	85.9	04.2	146	145.8	07.2	206	205.8	10.1	266	265.7	13.1
27	27.0	01.3	87	86.9	04.3	147	146.8	07.2	207	206.8	10.2	267	266.7	13.1
28	28.0	01.4	88	87.9	04.3	148	147.8	07.3	208	207.8	10.2	268	267.7	13.2
29	29.0	01.4	89	88.9	04.4	149	148.8	07.3	209	208.8	10.3	269	268.7	13.2
30	30.0	01.5	90	89.9	04.4	150	149.8	07.4	210	209.8	10.3	270	269.7	13.3
31	31.0	01.5	91	90.9	04.5	151	150.8	07.4	211	210.7	10.4	271	270.7	13.3
32	32.0	01.6	92	91.9	04.5	152	151.8	07.5	212	211.7	10.4	272	271.7	13.3
33	33.0	01.6	93	92.9	04.6	153	152.8	07.5	213	212.7	10.5	273	272.7	13.4
34	34.0	01.7	94	93.9	04.6	154	153.8	07.6	214	213.7	10.5	274	273.7	13.4
35	35.0	01.7	95	94.9	04.7	155	154.8	07.6	215	214.7	10.6	275	274.7	13.5
36	36.0	01.8	96	95.9	04.7	156	155.8	07.7	216	215.7	10.6	276	275.7	13.5
37	37.0	01.8	97	96.9	04.8	157	156.8	07.7	217	216.7	10.7	277	276.7	13.6
38	38.0	01.9	98	97.9	04.8	158	157.8	07.8	218	217.7	10.7	278	277.7	13.6
39	39.0	01.9	99	98.9	04.9	159	158.8	07.8	219	218.7	10.8	279	278.7	13.7
40	40.0	02.0	100	99.9	04.9	160	159.8	07.9	220	219.7	10.8	280	279.7	13.7
41	41.0	02.0	101	100.9	05.0	161	160.8	07.9	221	220.7	10.8	281	280.7	13.8
42	41.9	02.1	102	101.9	05.0	162	161.8	08.0	222	221.7	10.9	282	281.7	13.8
43	42.9	02.1	103	102.9	05.1	163	162.8	08.0	223	222.7	10.9	283	282.7	13.9
44	43.9	02.2	104	103.9	05.1	164	163.8	08.1	224	223.7	11.0	284	283.7	13.9
45	44.9	02.2	105	104.9	05.2	165	164.8	08.1	225	224.7	11.0	285	284.7	14.0
46	45.9	02.3	106	105.9	05.2	166	165.8	08.2	226	225.7	11.1	286	285.7	14.0
47	46.9	02.3	107	106.9	05.3	167	166.8	08.2	227	226.7	11.1	287	286.7	14.1
48	47.9	02.4	108	107.9	05.3	168	167.8	08.2	228	227.7	11.2	288	287.7	14.1
49	48.9	02.4	109	108.9	05.4	169	168.8	08.3	229	228.7	11.2	289	288.7	14.2
50	49.9	02.5	110	109.9	05.4	170	169.8	08.3	230	229.7	11.3	290	289.7	14.2
51	50.9	02.5	111	110.9	05.5	171	170.8	08.4	231	230.7	11.3	291	290.7	14.3
52	51.9	02.6	112	111.9	05.5	172	171.8	08.4	232	231.7	11.4	292	291.7	14.3
53	52.9	02.6	113	112.9	05.5	173	172.8	08.5	233	232.7	11.4	293	292.7	14.4
54	53.9	02.7	114	113.9	05.6	174	173.8	08.5	234	233.7	11.5	294	293.6	14.4
55	54.9	02.7	115	114.9	05.6	175	174.8	08.6	235	234.7	11.5	295	294.6	14.5
56	55.9	02.8	116	115.9	05.7	176	175.8	08.6	236	235.7	11.6	296	295.6	14.5
57	56.9	02.8	117	116.9	05.7	177	176.8	08.7	237	236.7	11.6	297	296.6	14.6
58	57.9	02.9	118	117.9	05.8	178	177.8	08.7	238	237.7	11.7	298	297.6	14.6
59	58.9	02.9	119	118.9	05.8	179	178.8	08.8	239	238.7	11.7	299	298.6	14.7
60	59.9	02.9	120	119.9	05.9	180	179.8	08.8	240	239.7	11.8	300	299.6	14.7
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.1	61	60.7	06.0	121	120.4	11.9	181	180.1	17.7	241	239.8	23.6
2	02.0	00.2	62	61.7	06.1	122	121.4	12.0	182	181.1	17.8	242	240.8	23.7
3	03.0	00.3	63	62.7	06.2	123	122.4	12.1	183	182.1	17.9	243	241.8	23.8
4	04.0	00.4	64	63.7	06.3	124	123.4	12.2	184	183.1	18.0	244	242.8	23.9
5	05.0	00.5	65	64.7	06.4	125	124.4	12.3	185	184.1	18.1	245	243.8	24.0
6	06.0	00.6	66	65.7	06.5	126	125.4	12.3	186	185.1	18.2	246	244.8	24.1
7	07.0	00.7	67	66.7	06.6	127	126.4	12.4	187	186.1	18.3	247	245.8	24.2
8	08.0	00.8	68	67.7	06.7	128	127.4	12.5	188	187.1	18.4	248	246.8	24.3
9	09.0	00.9	69	68.7	06.8	129	128.4	12.6	189	188.1	18.5	249	247.8	24.4
10	10.0	01.0	70	69.7	06.9	130	129.4	12.7	190	189.1	18.6	250	248.8	24.5
11	10.9	01.1	71	70.7	07.0	131	130.4	12.8	191	190.1	18.7	251	249.8	24.6
12	11.9	01.2	72	71.7	07.1	132	131.4	12.9	192	191.1	18.8	252	250.8	24.7
13	12.9	01.3	73	72.7	07.2	133	132.4	13.0	193	192.1	18.9	253	251.8	24.8
14	13.9	01.4	74	73.6	07.3	134	133.4	13.1	194	193.1	19.0	254	252.8	24.9
15	14.9	01.5	75	74.6	07.4	135	134.3	13.2	195	194.1	19.1	255	253.8	25.0
16	15.9	01.6	76	75.6	07.4	136	135.3	13.3	196	195.1	19.2	256	254.8	25.1
17	16.9	01.7	77	76.6	07.5	137	136.3	13.4	197	196.1	19.3	257	255.8	25.2
18	17.9	01.8	78	77.6	07.6	138	137.3	13.5	198	197.0	19.4	258	256.8	25.3
19	18.9	01.9	79	78.6	07.7	139	138.3	13.6	199	198.0	19.5	259	257.8	25.4
20	19.9	02.0	80	79.6	07.8	140	139 3	13.7	200	199 0	19.6	260	258.7	25.5
21	20.9	02.1	81	80.6	07.9	141	140.3	13.8	201	200.0	19.7	261	259.7	25.6
22	21.9	02.2	82	81.6	08.0	142	141.3	13.9	202	201.0	19.8	262	260.7	25.7
23	22.9	02.3	83	82.6	08.1	143	142.3	14.0	203	202.0	19.9	263	261.7	25.8
24	23.9	02.4	84	83.6	08.2	144	143.3	14.1	204	203.0	20.0	264	262.7	25.9
25	24.9	02.4	85	84.6	08.3	145	144.3	14.2	205	204.0	20.1	265	263.7	26.0
26	25.9	02.5	86	85.6	08.4	146	145.3	14.3	206	205.0	20.2	266	264.7	26.1
27	26.9	02.6	87	86.6	08.5	147	146.3	14.4	207	206.0	20.3	267	265.7	26.2
28	27.9	02.7	88	87.6	08.6	148	147.3	14.5	208	207.0	20.4	268	266.7	26.3
29	28.9	02.8	89	88.6	08.7	149	148.3	14.6	209	208.0	20.5	269	267.7	26.4
30	29.9	02.9	90	89.6	08.8	150	149.3	14.7	210	209.0	20.6	270	268.7	26.5
31	30.9	03.0	91	90.6	08.9	151	150.3	14.8	211	210.0	20.7	271	269.7	26.6
32	31.8	03.1	92	91.6	09.0	152	151.3	14.9	212	211.0	20.8	272	270.7	26.7
33	32.8	03.2	93	92.6	09.1	153	152.3	15.0	213	212.0	20.9	273	271.7	26.8
34	33.8	03.3	94	93.6	09.2	154	153.3	15.1	214	213.0	21.0	274	272.7	26.9
35	34.8	03.4	95	94.5	09.3	155	154.3	15.2	215	214.0	21.1	275	273.7	27.0
36	35.8	03.5	96	95.5	09.4	156	155.2	15.3	216	215.0	21.2	276	274.7	27.1
37	36.8	03.6	97	96.5	09.5	157	156.2	15.4	217	216.0	21.3	277	275.7	27.2
38	37.8	03.7	98	97.5	09.6	158	157.2	15.5	218	216.9	21.4	278	276.7	27.3
39	38.8	03.8	99	98.5	09.7	159	158.2	15.6	219	217.9	21.5	279	277.7	27.3
40	39.8	03.9	100	99.5	09.8	160	159.2	15.7	220	218.9	21.6	280	278.7	27.4
41	40.8	04.0	101	100.5	09.9	161	160.2	15.8	221	219.9	21.7	281	279.6	27.5
42	41.8	04.1	102	101.5	10.0	162	161.2	15.9	222	220.9	21.8	282	280.6	27.6
43	42.8	04.2	103	102.5	10.1	163	162.2	16.0	223	221.9	21.9	283	281.6	27.7
44	43.8	04.3	104	103.5	10.2	164	163.2	16.1	224	222.9	22.0	284	282.6	27.8
45	44.8	04.4	105	104.5	10.3	165	164.2	16.2	225	223.9	22.1	285	283.6	27.9
46	45.8	04.5	106	105.5	10.4	166	165.2	16.3	226	224.9	22.2	286	284.6	28.0
47	46.8	04.6	107	106.5	10.5	167	166.2	16.4	227	225.9	22.2	287	285.6	28.1
48	47.8	04.7	108	107.5	10.6	168	167.2	16.5	228	226.9	22.3	288	286.6	28.2
49	48.8	04.8	109	108.5	10.7	169	168.2	16.6	229	227.9	22.4	289	287.6	28.3
50	49.8	04.9	110	109.5	10.8	170	169.2	16.7	230	228.9	22.5	290	288.6	28.4
51	50.8	05.0	111	110.5	10.9	171	170.2	16.8	231	229.9	22.6	291	289.6	28.5
52	51.7	05.1	112	111.5	11.0	172	171.2	16.9	232	230.9	22.7	292	290.6	28.6
53	52.7	05.2	113	112.5	11.1	173	172.2	17.0	233	231.9	22.8	293	291.6	28.7
54	53.7	05.3	114	113.5	11.2	174	173.2	17.1	234	232.9	22.9	294	292.6	28.8
55	54.7	05.4	115	114.5	11.3	175	174.2	17.2	235	233.9	23.0	295	293.6	28.9
56	55.7	05.5	116	115.4	11.4	176	175.2	17.3	236	234.9	23.1	296	294.6	29.0
57	56.7	05.6	117	116.4	11.5	177	176.1	17.4	237	235.9	23.2	297	295 6	29.1
58	57.7	05.7	118	117.4	11.6	178	177.1	17.4	238	236.9	23.3	298	296.6	29.2
59	58.7	05.8	119	118.4	11.7	179	178.1	17.5	239	237.8	23.4	299	297.6	29.3
60	59.7	05.9	120	119.4	11.8	180	179.1	17 6	240	238.8	23.5	300	298.6	29.4
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.1	61	60.3	08.9	121	119.7	17.7	181	179.0	26.6	241	238.4	35.4
2	02.0	00.3	62	61.3	09.1	122	120.7	17.9	182	180.0	26.7	242	239.4	35.5
3	03.0	00.4	63	62.3	09.2	123	121.7	18.0	183	181.0	26.8	243	240.4	35.7
4	04.0	00.6	64	63.3	09.4	124	122.7	18.2	184	182.0	27.0	244	241.4	35.8
5	04.9	00.7	65	64.3	09.5	125	123.6	18.3	185	183.0	27.1	245	242.3	35.9
6	05.9	00.9	66	65.3	09.7	126	124.6	18.5	186	184.0	27.3	246	243.3	36.1
7	06.9	01.0	67	66.3	09.8	127	125.6	18.6	187	185.0	27.4	247	244.3	36.2
8	07.9	01.2	68	67.3	10.0	128	126.6	18.8	188	186.0	27.6	248	245.3	36.4
9	08.9	01.3	69	68.2	10.1	129	127.6	18.9	189	186.9	27.7	249	246.3	36.5
10	09.9	01.5	70	69.2	10.3	130	128.6	19.1	190	187.9	27.9	250	247.3	36.7
11	10.9	01.6	71	70.2	10.4	131	129.6	19.2	191	188.9	28.0	251	248.3	36.8
12	11.9	01.8	72	71.2	10.6	132	130.6	19.4	192	189.9	28.2	252	249.3	37.0
13	12.9	01.9	73	72.2	10.7	133	131.6	19.5	193	190.9	28.3	253	250.3	37.1
14	13.8	02.1	74	73.2	10.9	134	132.5	19.7	194	191.9	28.5	254	251.2	37.3
15	14.8	02.2	75	74.2	11.0	135	133.5	19.8	195	192.9	28.6	255	252.2	37.4
16	15.8	02.3	76	75.2	11.1	136	134.5	20.0	196	193.9	28.8	256	253.2	37.6
17	16.8	02.5	77	76.2	11.3	137	135.5	20.1	197	194.9	28.9	257	254.2	37.7
18	17.8	02.6	78	77.2	11.4	138	136.5	20.2	198	195.9	29.0	258	255.2	37.9
19	18.8	02.8	79	78.1	11.6	139	137.5	20.4	199	196.8	29.2	259	256.2	38.0
20	19.8	02.9	80	79.1	11.7	140	138.5	20.5	200	197.8	29.3	260	257.2	38.1
21	20.8	03.1	81	80.1	11.9	141	139.5	20.7	201	198.8	29.5	261	258.2	38.3
22	21.8	03.2	82	81.1	12.0	142	140.5	20.8	202	199.8	29.6	262	259.2	38.4
23	22.7	03.4	83	82.1	12.2	143	141.4	21.0	203	200.8	29.8	263	260.1	38.6
24	23.7	03.5	84	83.1	12.3	144	142.4	21.1	204	201.8	29.9	264	261.1	38.7
25	24.7	03.7	85	84.1	12.5	145	143.4	21.3	205	202.8	30.1	265	262.1	38.9
26	25.7	03.8	86	85.1	12.6	146	144.4	21.4	206	203.8	30.2	266	263.1	39.0
27	26.7	04.0	87	86.1	12.8	147	145.4	21.6	207	204.8	30.4	267	264.1	39.2
28	27.7	04.1	88	87.0	12.9	148	146.4	21.7	208	205.7	30.5	268	265.1	39.3
29	28.7	04.3	89	88.0	13.1	149	147.4	21.9	209	206.7	30.7	269	266.1	39.5
30	29.7	04.4	90	89.0	13.2	150	148.4	22.0	210	207.7	30.8	270	267.1	39.6
31	30.7	04.5	91	90.0	13.3	151	149.4	22.2	211	208.7	30.9	271	268.1	39.8
32	31.7	04.7	92	91.0	13.5	152	150.3	22.3	212	209.7	31.1	272	269.0	39.9
33	32.6	04.8	93	92.0	13.6	153	151.3	22.4	213	210.7	31.2	273	270.0	40.1
34	33.6	05.0	94	93.0	13.8	154	152.3	22.6	214	211.7	31.4	274	271.0	40.2
35	34.6	05.1	95	94.0	13.9	155	153.3	22.7	215	212.7	31.5	275	272.0	40.3
36	35.6	05.3	96	95.0	14.1	156	154.3	22.9	216	213.7	31.7	276	273.0	40.5
37	36.6	05.4	97	95.9	14.2	157	155.3	23.0	217	214.6	31.8	277	274.0	40.6
38	37.6	05.6	98	96.9	14.4	158	156.3	23.2	218	215.6	32.0	278	275.0	40.8
39	38.6	05.7	99	97.9	14.5	159	157.3	23.3	219	216.6	32.1	279	276.0	40.9
40	39.6	05.9	100	98.9	14.7	160	158.3	23.5	220	217.6	32.3	280	277.0	41.1
41	40.6	06.0	101	99.9	14.8	161	159.3	23.6	221	218.6	32.4	281	278.0	41.2
42	41.5	06.2	102	100.9	15.0	162	160.2	23.8	222	219.6	32.6	282	278.9	41.4
43	42.5	06.3	103	101.9	15.1	163	161.2	23.9	223	220.6	32.7	283	279.9	41.5
44	43.5	06.5	104	102.9	15.3	164	162.2	24.1	224	221.6	32.9	284	280.9	41.7
45	44.5	06.6	105	103.9	15.4	165	163.2	24.2	225	222.6	33.0	285	281.9	41.8
46	45.5	06.7	106	104.8	15.5	166	164.2	24.4	226	223.5	33.2	286	282.9	42.0
47	46.5	06.9	107	105.8	15.7	167	165.2	24.5	227	224.5	33.3	287	283.9	42.1
48	47.5	07.0	108	106.8	15.8	168	166.2	24.6	228	225.5	33.4	288	284.9	42.3
49	48.5	07.2	109	107.8	16.0	169	167.2	24.8	229	226.5	33.6	289	285.9	42.4
50	49.5	07.3	110	108.8	16.1	170	168.2	24.9	230	227.5	33.7	290	286.9	42.5
51	50.4	07.5	111	109.8	16.3	171	169.1	25.1	231	228.5	33.9	291	287.8	42.7
52	51.4	07.6	112	110.8	16.4	172	170.1	25.2	232	229.5	34.0	292	288.8	42.8
53	52.4	07.8	113	111.8	16.6	173	171.1	25.4	233	230.5	34.2	293	289.8	43.0
54	53.4	07.9	114	112.8	16.7	174	172.1	25.5	234	231.5	34.3	294	290.8	43.1
55	54.4	08.1	115	113.7	16.9	175	173.1	25.7	235	232.4	34.5	295	291.8	43.3
56	55.4	08.2	116	114.7	17.0	176	174.1	26.8	236	233.4	34.6	296	292.8	43.4
57	56.4	08.4	117	115.7	17.2	177	175.1	26.0	237	234.4	34.8	297	293.8	43.6
58	57.4	08.5	118	116.7	17.3	178	176.1	26.1	238	235.4	34.9	298	294.8	43.7
59	58.4	08.7	119	117.7	17.5	179	177.1	26.3	239	236.4	35.1	299	295.8	43.9
60	59.3	08.8	120	118.7	17.6	180	178.0	26.4	240	237.4	35.2	300	296.8	44.0
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.2	61	59.8	11.9	121	118.7	23.6	181	177.5	35.3	241	236.4	47.0
2	02.0	00.4	62	60.8	12.1	122	119.7	23.8	182	178.5	35.5	242	237.3	47.2
3	02.9	00.6	63	61.8	12.3	123	120.6	24.0	183	179.5	35.7	243	238.3	47.4
4	03.9	00.8	64	62.8	12.5	124	121.6	24.2	184	180.5	35 9	244	239.3	47.6
5	04.9	01.0	65	63.7	12.7	125	122.6	24.4	185	181.4	36.1	245	240.3	47.8
6	05.9	01.2	66	64.7	12.9	126	123.6	24.6	186	182.4	36.3	246	241.3	48.0
7	06.9	01.4	67	65.7	13.1	127	124.6	24.8	187	183.4	36.5	247	242.3	48.2
8	07.8	01.6	68	66.7	13.3	128	125.5	25.0	188	184.4	36.7	248	243.2	48.4
9	08.8	01.8	69	67.7	13.5	129	126.5	25.2	189	185.4	36.9	249	244.2	48.6
10	09.8	02.0	70	68.7	13.7	130	127.5	25.4	190	186.3	37.1	250	245.2	48.8
11	10.8	02.1	71	69.6	13.9	131	128.5	25.6	191	187.3	37.3	251	246.2	49.0
12	11.8	02.3	72	70.6	14.0	132	129.5	25.8	192	188.3	37.5	252	247.2	49.2
13	12.7	02.5	73	71.6	14.2	133	130.4	26.0	193	189.3	37.7	253	248.1	49.4
14	13.7	02.7	74	72.6	14.4	134	131.4	26.1	194	190.3	37.8	254	249.1	49.6
15	14.7	02.9	75	73.6	14.6	135	132.4	26.3	195	191.2	38.0	255	250.1	49.7
16	15.7	03.1	76	74.5	14.8	136	133.4	26.5	196	192.2	38.2	256	251.1	49.9
17	16.7	03.3	77	75.5	15.0	137	134.4	26.7	197	193.2	38.4	257	252.1	50.1
18	17.7	03.5	78	76.5	15.2	138	135.3	26.9	198	194.2	38.6	258	253.0	50.3
19	18.6	03.7	79	77.5	15.4	139	136.3	27.1	199	195.2	38.8	259	254.0	50.5
20	19.6	03.9	80	78.5	15.6	140	137.3	27.3	200	196.2	39.0	260	255.0	50.7
21	20.6	04.1	81	79.4	15.8	141	138.3	27.5	201	197.1	39.2	261	256.0	50.9
22	21.6	04.3	82	80.4	16.0	142	139.3	27.7	202	198.1	39.4	262	257.0	51.1
23	22.6	04.5	83	81.4	16.2	143	140.2	27.9	203	199.1	39.6	263	257.9	51.3
24	23.5	04.7	84	82.4	16.4	144	141.2	28.1	204	200.1	39.8	264	258.9	51.5
25	24.5	04.9	85	83.4	16.6	145	142.2	28.3	205	201.1	40.0	265	259.9	51.7
26	25.5	05.1	86	84.3	16.8	146	143.2	28.5	206	202.0	40.2	266	260.9	51.9
27	26.5	05.3	87	85.3	17.0	147	144.2	28.7	207	203.0	40.4	267	261.9	52.1
28	27.5	05.5	88	86.3	17.2	148	145.2	28.9	208	204.0	40.6	268	262.8	52.3
29	28.4	05.7	89	87.3	17.4	149	146.1	29.1	209	205.0	40.8	269	263.8	52.5
30	29.4	05.9	90	88.3	17.6	150	147.1	29.3	210	206.0	41.0	270	264.8	52.7
31	30.4	06.0	91	89.2	17.8	151	148.1	29.5	211	206.9	41.2	271	265.8	52.9
32	31.4	06.2	92	90.2	18.0	152	149.1	29.7	212	207.9	41.4	272	266.8	53.1
33	32.4	06.4	93	91.2	18.1	153	150.1	29.9	213	208.9	41.6	273	267.8	53.3
34	33.3	06.6	94	92.2	18.3	154	151.0	30.0	214	209.9	41.7	274	268.7	53.5
35	34.3	06.8	95	93.2	18.5	155	152.0	30.2	215	210.9	41.9	275	269.7	53.6
36	35.3	07.0	96	94.2	18.7	156	153.0	30.4	216	211.8	42.1	276	270.7	53.8
37	36.3	07.2	97	95.1	18.9	157	154.0	30.6	217	212.8	42.3	277	271.7	54.0
38	37.3	07.4	98	96.1	19.1	158	155.0	30.8	218	213 8	42.5	278	272.7	54.2
39	38.2	07.6	99	97.1	19.3	159	155.9	31.0	219	214.8	42.7	279	273.6	54.4
40	39.2	07.8	100	98.1	19.5	160	156.9	31.2	220	215.8	42.9	280	274.6	54.6
41	40.2	08.0	101	99.1	19.7	161	157.9	31.4	221	216.7	43.1	281	275.6	54.8
42	41.2	08.2	102	100.0	19.9	162	158.9	31.6	222	217.7	43.3	282	276.6	55.0
43	42.2	08.4	103	101.0	20.1	163	159.9	31.8	223	218.7	43.5	283	277.6	55.2
44	43.2	08.6	104	102.0	20.3	164	160.8	32.0	224	219 7	43.7	284	278.5	55.4
45	44.1	08.8	105	103.0	20.5	165	161.8	32.2	225	220.7	43.9	285	279.5	55.6
46	45.1	09.0	106	104.0	20.7	166	162.8	32.4	226	221.7	44.1	286	280.5	55.8
47	46.1	09.2	107	104.9	20.9	167	163.8	32.6	227	222.6	44.3	287	281.5	56.0
48	47.1	09.4	108	105.9	21.1	168	164.8	32.8	228	223.6	44.5	288	282.5	56.2
49	48.1	09.6	109	106.9	21.3	169	165.7	33.0	229	224.6	44.7	289	283.4	56.4
50	49.0	09.8	110	107.9	21.5	170	166.7	33.2	230	225.6	44.9	290	284.4	56.6
51	50.0	10.0	111	108.9	21.7	171	167.7	33.4	231	226.6	45.1	291	285.4	56.8
52	51.0	10.1	112	109.8	21.9	172	168.7	33.6	232	227.5	45.3	292	286.4	57.0
53	52.0	10.3	113	110.8	22.0	173	169.7	33.8	233	228.5	45.5	293	287.4	57.2
54	53.0	10.5	114	111.8	22.2	174	170.7	34.0	234	229.5	45.7	294	288.3	57.4
55	53.9	10.7	115	112.8	22.4	175	171.6	34.1	235	230.5	45.8	295	289.3	57.6
56	54.9	10.9	116	113.8	22.6	176	172.6	34.3	236	231.5	46.0	296	290.3	57.7
57	55.9	11.1	117	114.7	22.8	177	173.6	34.5	237	232.4	46.2	297	291.3	57.9
58	56.9	11.3	118	115.7	23.0	178	174.6	34.7	238	233.4	46.4	298	292.3	58.1
59	57.9	11.5	119	116.7	23.2	179	175.6	34.9	239	234.4	46.6	299	293.3	58.3
60	58.8	11.7	120	117.7	23.4	180	176.5	35.1	240	235.4	46.8	300	294.2	58.5
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Difference of Latitude and Departure for 7 Points.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.2	61	59.2	14.8	121	117.4	29.4	181	175.6	44.0	241	233.8	58.6
2	01.9	00.5	62	60.1	15.1	122	118.3	29 6	182	176.5	44.2	242	234.7	58.8
3	02.9	00.7	63	61.1	15.3	123	119.3	29.9	183	177.5	44 5	243	235.7	59.0
4	03.9	01.0	64	62.1	15.6	124	120.3	30.1	184	178.5	44.7	244	236.7	59.3
5	04.9	01.2	65	63.1	15.8	125	121.3	30.4	185	179.5	45.0	245	237.7	59.5
6	05.8	01.5	66	64.0	16.0	126	122.2	30.6	186	180.4	45.2	246	238.6	59.8
7	06.8	01.7	67	65.0	16.3	127	123.2	30.9	187	181.4	45.4	247	239.6	60.0
8	07.8	01.9	68	66.0	16.5	128	124.2	31.1	188	182.4	45.7	248	240.6	60.3
9	08.7	02.2	69	66.9	16.8	129	125.1	31.3	189	183.3	45.9	249	241.5	60.5
10	09.7	02.4	70	67.9	17.0	130	126.1	31.6	190	184.3	46.2	250	242.5	60 7
11	10.7	02.7	71	68.9	17.3	131	127.1	31.8	191	185.3	46.4	251	243.5	61.0
12	11.6	02.9	72	69.8	17.5	132	128.0	32.1	192	186.2	46.7	252	244.5	61.2
13	12.6	03.2	73	70.8	17.7	133	129.0	32.3	193	187.2	46.9	253	245.4	61.5
14	13.6	03.4	74	71.8	18.0	134	130.0	32.6	194	188.2	47.1	254	246.4	61.7
15	14.6	03.6	75	72.8	18.2	135	131.0	32.8	195	189.2	47.4	255	247.4	62.0
16	15.5	03.9	76	73.7	18.5	136	131.9	33.0	196	190.1	47.6	256	248.3	62.2
17	16.5	04.1	77	74.7	18.7	137	132.9	33.3	197	191.1	47.9	257	249.3	62.5
18	17.5	04.4	78	75.7	19.0	138	133.9	33.5	198	192.1	48.1	258	250.3	62.7
19	18.4	04.6	79	76.6	19.2	139	134.8	33.8	199	193.0	48.4	259	251.2	62.9
20	19.4	04.9	80	77.6	19.4	140	135.8	34.0	200	194.0	48 6	260	252.2	63.2
21	20.4	05.1	81	78.6	19.7	141	136 8	34.3	201	195.0	48.8	261	253.2	63.4
22	21.3	05.3	82	79.5	19.9	142	137.7	34.5	202	195.9	49.1	262	254.2	63.7
23	22.3	05.6	83	80.5	20.2	143	138.7	34.7	203	196.9	49.3	263	255.1	63.9
24	23.3	05.8	84	81.5	20.4	144	139.7	35.0	204	197.9	49.6	264	256.1	64.2
25	24.3	06.1	85	82.5	20.7	145	140.7	35.2	205	198.9	49.8	265	257.1	64.4
26	25.2	06.3	86	83.4	20.9	146	141.6	35.5	206	199.8	50.1	266	258.0	64.6
27	26.2	06.6	87	84.4	21.1	147	142 6	35.7	207	200.8	50.3	267	259.0	64.9
28	27.2	06.8	88	85.4	21.4	148	143.6	36.0	208	201.8	50.5	268	260.0	65.1
29	28.1	07.0	89	86.3	21.6	149	144.5	36.2	209	202.7	50.8	269	260.9	65.4
30	29.1	07.3	90	87.3	21.9	150	145.5	36.5	210	203.7	51.0	270	261.9	65.6
31	30.1	07.5	91	88.3	22.1	151	146.5	36.7	211	204.7	51.3	271	262.9	65.9
32	31.0	07.8	92	89.2	22.4	152	147.4	36.9	212	205.6	51.5	272	263.9	66.1
33	32.0	08.0	93	90.2	22.6	153	148.4	37.2	213	206.6	51.8	273	264.8	66.3
34	33.0	08.3	94	91.2	22.8	154	149.4	37.4	214	207.6	52.0	274	265.8	66.6
35	34.0	08.5	95	92.2	23.1	155	150.4	37.7	215	208.6	52.2	275	266.8	66.8
36	34 9	08.7	96	93.1	23.3	156	151.3	37.9	216	209.5	52.5	276	267.7	67.1
37	35.9	09.0	97	94.1	23.6	157	152.3	38.2	217	210.5	52.7	277	268.7	67.3
38	36.9	09.2	98	95.1	23.8	158	153.3	38.4	218	211.5	53.0	278	269.7	67.6
39	37.8	09.5	99	96.0	24.1	159	154.2	38.6	219	212.4	53.2	279	270.6	67.8
40	38.8	09.7	100	97.0	24.3	160	155.2	38.9	220	213.4	53.5	280	271.6	68.0
41	39.8	10.0	101	98.0	24.5	161	156.2	39.1	221	214.4	53.7	281	272.6	68.3
42	40 7	10.2	102	98.9	24.8	162	157.1	39.4	222	215.4	53.9	282	273.6	68.5
43	41.7	10.4	103	99.9	25.0	163	158.1	39.6	223	216.3	54.2	283	274.5	68.8
44	42.7	10.7	104	100.9	25.3	164	159.1	39.9	224	217.3	54 4	284	275.5	69.0
45	43.7	10.9	105	101.9	25.5	165	160.1	40.1	225	218.3	54.7	285	276.5	69.3
46	44.6	11.2	106	102.8	25.8	166	161.0	40.3	226	219.2	54.9	286	277.4	69.5
47	45.6	11.4	107	103.8	26.0	167	162.0	40.6	227	220.2	55.2	287	278.4	69.7
48	46.6	11.7	108	104.8	26.2	168	163.0	40.8	228	221.2	55.4	288	279.4	70.0
49	47.5	11.9	109	105.7	26.5	169	163.9	41.1	229	222.1	55.6	289	280.3	70.2
50	48.5	12.2	110	106.7	26.7	170	164.9	41.3	230	223.1	55.9	290	281.3	70.5
51	49.5	12.4	111	107.7	27 0	171	165.9	41.6	231	224.1	56.1	291	282.3	70.7
52	50.4	12.6	112	108.6	27.2	172	166.8	41.8	232	225.1	56.4	292	283.3	71.0
53	51.4	12.9	113	109.6	27.5	173	167.8	42.0	233	226.0	56.6	293	284.2	71.2
54	52.4	13.1	114	110.6	27.7	174	168.8	42.3	234	227.0	56.9	294	285.2	71.4
55	53.4	13.4	115	111.6	27.9	175	169.8	42.5	235	228.0	57.1	295	286.2	71.7
56	54.3	13.6	116	112.5	28.2	176	170.7	42.8	236	228.9	57.3	296	287.1	71.9
57	55.3	13.9	117	113.5	28.4	177	171.7	43.0	237	229.9	57.6	297	288.1	72.2
58	56.3	14.1	118	114.5	28.7	178	172.7	43.3	238	230.9	57.8	298	289.1	72.4
59	57.2	14.3	119	115.4	28.9	179	173.6	43.5	239	231.8	58.1	299	290.0	72.7
60	*58.2*	*14.6*	120	116.4	29.2	180	174.6	43.7	240	232.8	58.3	300	291.0	72.9
Dist.	*Dep.*	*Lat.*	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.3	61	58.4	17.7	121	115.8	35.1	181	173.2	52.5	241	230.6	70.0
2	01.9	00.6	62	59.3	18.0	122	116.8	35.4	182	174.2	52.8	242	231.6	70.2
3	02.9	00.9	63	60.3	18.3	123	117.7	35.7	183	175.1	53.1	243	232 5	70.5
4	03.8	01.2	64	61.2	18.6	124	118.7	36.0	184	176.1	53.4	244	233.5	70.8
5	04.8	01.5	65	62.2	18.9	125	119.6	36.3	185	177.0	53.7	245	234.5	71.1
6	05.7	01.7	66	63.2	19.2	126	120.6	36.6	186	178.0	54.0	246	235.4	71.4
7	06.7	02.0	67	64.1	19.4	127	121.5	36.9	187	179.0	54.3	247	236.4	71.7
8	07.7	02.3	68	65.1	19.7	128	122.5	37.2	188	179.9	54.6	248	237.3	72.0
9	08.6	02.6	69	66.0	20.0	129	123.5	37.4	189	180.9	54.9	249	238.3	72.3
10	09.6	02.9	70	67.0	20.3	130	124.4	37.7	190	181.8	55.1	250	239.2	72.6
11	10.5	03.2	71	67.9	20.6	131	125.4	38.0	191	182.8	55.4	251	240.2	72.9
12	11.5	03.5	72	68.9	20.9	132	126.3	38.3	192	183.7	55.7	252	241.2	73.1
13	12.4	03.8	73	69.9	21.2	133	127.3	38.6	193	184.7	56.0	253	242.1	73.4
14	13.4	04.1	74	70.8	21.5	134	128.2	38.9	194	185.7	56.3	254	243.1	73.7
15	14.4	04.4	75	71.8	21.8	135	129.2	39.2	195	186.6	56.6	255	244.0	74.0
16	15.3	04.6	76	72.7	22.1	136	130.1	39.5	196	187.6	56.9	256	245.0	74.3
17	16.3	04.9	77	73.7	22.3	137	131.1	39.8	197	188.5	57.2	257	245.9	74.6
18	17.2	05.2	78	74.6	22.6	138	132.1	40.1	198	189.5	57.5	258	246.9	74.9
19	18.2	05.5	79	75.6	22.9	139	133.0	40.3	199	190.4	57.8	259	247.9	75.2
20	19.1	05.8	80	76.6	23.2	140	134.0	40.6	200	191.4	58.1	260	248.8	75.5
21	20.1	06.1	81	77.5	23.5	141	134.9	40.9	201	192.3	58.4	261	249.8	75.8
22	21.1	06.4	82	78.5	23.8	142	135.9	41.2	202	193.3	58.6	262	250.7	76.0
23	22.0	06.7	83	79.4	24.1	143	136.8	41.5	203	194.3	58.9	263	251.7	76.3
24	23.0	07.0	84	80.4	24.4	144	137.8	41.8	204	195.2	59.2	264	252.6	76.6
25	23.9	07.3	85	81.3	24.7	145	138.8	42.1	205	196.2	59.5	265	253.6	76.9
26	24.9	07.5	86	82.3	25.0	146	139.7	42.4	206	197.1	59.8	266	254.6	77.2
27	25.8	07.8	87	83.3	25 2	147	140.7	42.7	207	198.1	60.1	267	255.5	77.5
28	26.8	08.1	88	84.2	25.5	148	141.6	43.0	208	199.0	60.4	268	256.5	77.8
29	27.8	08.4	89	85.2	25.8	149	142.6	43.2	209	200.0	60.7	269	257.4	78.1
30	28.7	08.7	90	86.1	26.1	150	143.5	43.5	210	201.0	61.0	270	258.4	78.4
31	29.7	09.0	91	87.1	26.4	151	144.5	43.8	211	201.9	61.2	271	259.3	78.7
32	30.6	09.3	92	88.0	26.7	152	145.5	44.1	212	202.9	61.5	272	260.3	79.0
33	31.6	09.6	93	89.0	27.0	153	146.4	44.4	213	203.8	61.8	273	261.2	79.2
34	32.5	09.9	94	90.0	27.3	154	147.4	44.7	214	204.8	62.1	274	262.2	79.5
35	33.5	10.2	95	90.9	27.6	155	148.3	45.0	215	205.7	62.4	275	263.2	79.8
36	34.5	10.4	96	91.9	27.9	156	149.3	45.3	216	206.7	62.7	276	264.1	80.1
37	35.4	10.7	97	92.8	28.2	157	150.2	45.6	217	207.7	63.0	277	265.1	80.4
38	36.4	11.0	98	93.8	28.4	158	151.2	45.9	218	208.6	63.3	278	266.0	80.7
39	37.3	11.3	99	94.7	28 7	159	152.2	46.1	219	209.6	63.6	279	267.0	81.0
40	38.3	11.6	100	95.7	29.0	160	153.1	46.4	220	210.5	63.9	280	267.9	81.3
41	39.2	11.9	101	96.7	29.3	161	154.1	46.7	221	211.5	64.1	281	268.9	81.6
42	40.2	12.2	102	97.6	29.6	162	155.0	47.0	222	212.4	64.4	282	269.9	81.9
43	41.2	12.5	103	98.6	29.9	163	156.0	47.3	223	213.4	64.7	283	270.8	82.1
44	42.1	12.8	104	99.5	30.2	164	156.9	47.6	224	214.4	65.0	284	271.8	82.4
45	43.1	13.1	105	100.5	30.5	165	157.9	47.9	225	215.3	65.3	285	272.7	82.7
46	44.0	13.3	106	101.4	30.8	166	158.9	48.2	226	216.3	65.6	286	273.7	83.0
47	45.0	13.6	107	102.4	31.1	167	159.8	48.5	227	217.2	65.9	287	274.6	83.3
48	45.9	13.9	108	103.4	31.4	168	160.8	48.8	228	218.2	66.2	288	275.6	83.6
49	46.9	14.2	109	104.3	31.6	169	161.7	49.1	229	219.1	66.5	289	276.6	83.9
50	47.9	14 5	110	105.3	31.9	170	162.7	49.3	230	220.1	66.8	290	277.5	84.2
51	48.8	14.8	111	106.2	32.2	171	163.6	49.6	231	221.1	67.0	291	278.5	84.5
52	49.8	15.1	112	107.2	32.5	172	164.6	49.9	232	222.0	67.3	292	279.4	84.8
53	50.7	15.4	113	108.1	32.8	173	165.6	50.2	233	223.0	67.6	293	280.4	85.0
54	51.7	15.7	114	109.1	33.1	174	166.5	50.5	234	223.9	67.9	294	281.3	85.3
55	52.6	16.0	115	110.1	33.4	175	167.5	50.8	235	224.9	68.2	295	282.3	85.6
56	53.6	16.3	116	111.0	33.7	176	168.4	51.1	236	225.8	68.5	296	283.3	85.9
57	54.5	16.5	117	112.0	34.0	177	169.4	51.4	237	226.8	68.8	297	284.2	86.2
58	55.5	16.8	118	112.9	34.2	178	170.3	51.7	238	227.8	69.1	298	285.2	86.5
59	56.5	17.1	119	113.9	34.5	179	171.3	52.0	239	228.7	69.4	299	286.1	86.8
60	57.4	17.4	120	114.8	34.8	180	172.3	52.2	240	229.7	69.7	300	287.1	87.1
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Difference of Latitude and Departure for 6 ½ Points.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.9	00.3	61	57.4	20.5	121	113.9	40.8	181	170.4	61.0	241	226.9	81.2
2	01.9	00.7	62	58.4	20.9	122	114.9	41.1	182	171.4	61.3	242	227.8	81.5
3	02.8	01.0	63	59.3	21.2	123	115.8	41.4	183	172.3	61.6	243	228.8	81.9
4	03.8	01.3	64	60.3	21.6	124	116.7	41.8	184	173.2	62.0	244	229.7	82.2
5	04.7	01.7	65	61.2	21.9	125	117.7	42.1	185	174.2	62.3	245	230.7	82.5
6	05.6	02.0	66	62.1	22.2	126	118.6	42.4	186	175.1	62.7	246	231.6	82.9
7	06.6	02.4	67	63.1	22.6	127	119.6	42.8	187	176.1	63.0	247	232.6	83.2
8	07.5	02.7	68	64.0	22.9	128	120.5	43.1	188	177.0	63.3	248	233.5	83.5
9	08.5	03.0	69	65.0	23.2	129	121.5	43.5	189	177.9	63.7	249	234.4	83.9
10	09.4	03.4	70	65.9	23.6	130	122.4	43.8	190	178.9	64.0	250	235.4	84.2
11	10.4	03.7	71	66.8	23.9	131	123.3	44.1	191	179.8	64.3	251	236.3	84.6
12	11.3	04.0	72	67.8	24.3	132	124.3	44.5	192	180.8	64.7	252	237.3	84.9
13	12.2	04.4	73	68.7	24.6	133	125.2	44.8	193	181.7	65.0	253	238.2	85.2
14	13.2	04.7	74	69.7	24.9	134	126.2	45.1	194	182.7	65.4	254	239.1	85.6
15	14.1	05.1	75	70.6	25.3	135	127.1	45.5	195	183.6	65.7	255	240.1	85.9
16	15.1	05.4	76	71.6	25.6	136	128.0	45.8	196	184.5	66.0	256	241.0	86.2
17	16.0	05.7	77	72.5	25.9	137	129.0	46.1	197	185.5	66.4	257	242.0	86.6
18	17.0	06.1	78	73.4	26.3	138	129.9	46.5	198	186.4	66.7	258	242.9	86.9
19	17.9	06.4	79	74.4	26.6	139	130.9	46.8	199	187.4	67.0	259	243.9	87.2
20	18.8	06.7	80	75.3	26.9	140	131.8	47.2	200	188.3	67.4	260	244.8	87.6
21	19.8	07.1	81	76.3	27.3	141	132.8	47.5	201	189.2	67.7	261	245.7	87.9
22	20.7	07.4	82	77.2	27.6	142	133.7	47.8	202	190.2	68.0	262	246.7	88.3
23	21.7	07.7	83	78.1	28.0	143	134.6	48.2	203	191.1	68.4	263	247.6	88.6
24	22.6	08.1	84	79.1	28.3	144	135.6	48.5	204	192.1	68.7	264	248.6	88.9
25	23.5	08.4	85	80.0	28.6	145	136.5	48.8	205	193.0	69.1	265	249.5	89.3
26	24.5	08.8	86	81.0	29.0	146	137.5	49.2	206	194.0	69.4	266	250.4	89.6
27	25.4	09.1	87	81.9	29.3	147	138.4	49.5	207	194.9	69.7	267	251.4	89.9
28	26.4	09.4	88	82.9	29.6	148	139.3	49.9	208	195.8	70.1	268	252.3	90.3
29	27.3	09.8	89	83.8	30.0	149	140.3	50.2	209	196.8	70.4	269	253.3	90.6
30	28.2	10.1	90	84.7	30.3	150	141.2	50.5	210	197.7	70.7	270	254.2	91.0
31	29.2	10.4	91	85.7	30.7	151	142.2	50.9	211	198.7	71.1	271	255.2	91.3
32	30.1	10.8	92	86.6	31.0	152	143.1	51.2	212	199.6	71.4	272	256.1	91.6
33	31.1	11.1	93	87.6	31.3	153	144.1	51.5	213	200.5	71.8	273	257.0	92.0
34	32.0	11.5	94	88.5	31.7	154	145.0	51.9	214	201.5	72.1	274	258.0	92.3
35	33.0	11.8	95	89.4	32.0	155	145.9	52.2	215	202.4	72.4	275	258.9	92.6
36	33.9	12.1	96	90.4	32.3	156	146.9	52.5	216	203.4	72.8	276	259.9	93.0
37	34.8	12.5	97	91.3	32.7	157	147.8	52.9	217	204.3	73.1	277	260.8	93.3
38	35.8	12.8	98	92.3	33.0	158	148.8	53.2	218	205.3	73.4	278	261.7	93.7
39	36.7	13.1	99	93.2	33.3	159	149.7	53.6	219	206.2	73.8	279	262.7	94.0
40	37.7	13.5	100	94.2	33.7	160	150.6	53.9	220	207.1	74.1	280	263.6	94.3
41	38.6	13.8	101	95.1	34.0	161	151.6	54.2	221	208.1	74.4	281	264.6	94.7
42	39.5	14.1	102	96.0	34.4	162	152.5	54.6	222	209.0	74.8	282	265.5	95.0
43	40.5	14.5	103	97.0	34.7	163	153.5	54.9	223	210.0	75.1	283	266.5	95.3
44	41.4	14.8	104	97.9	35.0	164	154.4	55.2	224	210.9	75.5	284	267.4	95.7
45	42.4	15.2	105	98.9	35.4	165	155.3	55.6	225	211.8	75.8	285	268.3	96.0
46	43.3	15.5	106	99.8	35.7	166	156.3	55.9	226	212.8	76.1	286	269.3	96.3
47	44.3	15.8	107	100.7	36.0	167	157.2	56.3	227	213.7	76.5	287	270.2	96.7
48	45.2	16.2	108	101.7	36.4	168	158.2	56.6	228	214.7	76.8	288	271.2	97.0
49	46.1	16.5	109	102.6	36.7	169	159.1	56.9	229	215.6	77.1	289	272.1	97.4
50	47.1	16.8	110	103.6	37.1	170	160.1	57.3	230	216.5	77.5	290	273.0	97.7
51	48.0	17.2	111	104.5	37.4	171	161.0	57.6	231	217.5	77.8	291	274.0	98.0
52	49.0	17.5	112	105.4	37.7	172	161.9	57.9	232	218.4	78.2	292	274.9	98.4
53	49.9	17.9	113	106.4	38.1	173	162.9	58.3	233	219.4	78.5	293	275.9	98.7
54	50.8	18.2	114	107.3	38.4	174	163.8	58.6	234	220.3	78.8	294	276.8	99.0
55	51.8	18.5	115	108.3	38.7	175	164.8	59.0	235	221.3	79.2	295	277.7	99.4
56	52.7	18.9	116	109.2	39.1	176	165.7	59.3	236	222.2	79.5	296	278.7	99.7
57	53.7	19.2	117	110.2	39.4	177	166.6	59.6	237	223.1	79.8	297	279.6	100.1
58	54.6	19.5	118	111.1	39.7	178	167.6	60.0	238	224.1	80.2	298	280.6	100.4
59	55.5	19.9	119	112.0	40.1	179	168.5	60.3	239	225.0	80.5	299	281.5	100.7
60	*56.5*	*20.2*	120	113.0	40.4	180	169.5	60.6	240	226.0	80.8	300	282.5	101.1
Dist.	*Dep.*	*Lat.*	*Dist.*	*Dep.*	*Lat.*	*Dist.*	*Dep.*	*Lat.*	*Dist.*	*Dep.*	*Lat.*	*Dist.*	*Dep.*	*Lat.*

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.9	00.4	61	56.4	23.3	121	111.8	46.3	181	167.2	69.3	241	222.7	92.2
2	01.8	00.8	62	57.3	23.7	122	112.7	46.7	182	168.2	69.7	242	223.6	92.6
3	02.8	01.1	63	58.2	24.1	123	113.6	47.1	183	169.1	70.0	243	224.5	93.0
4	03.7	01.5	64	59.1	24.5	124	114.6	47.5	184	170.0	70.4	244	225.4	93.4
5	04.6	01.9	65	60.1	24.9	125	115.5	47.8	185	170.9	70.8	245	226.4	93.8
6	05.5	02.3	66	61.0	25.3	126	116.4	48.2	186	171.8	71.2	246	227.3	94.1
7	06.5	02.7	67	61.9	25.6	127	117.3	48.6	187	172.8	71.6	247	228.2	94.5
7	07.4	03.1	68	62.8	26.0	128	118.3	49.0	188	173.7	71.9	248	229.1	94.9
9	08.3	03.4	69	63.8	26.4	129	119.2	49.4	189	174.6	72.3	249	230.1	95.3
10	09.2	03.8	70	64.7	26.8	130	120.1	49.8	190	175.5	72.7	250	231.0	95.7
11	10.2	04.2	71	65.6	27.2	131	121.0	50.1	191	176.5	73.1	251	231.9	96.1
12	11.1	04.6	72	66.5	27.6	132	122.0	50.5	192	177.4	73.5	252	232.8	96.4
13	12.0	05.0	73	67.4	27.9	133	122.9	50.9	193	178.3	73.9	253	233.7	96.8
14	12.9	05.4	74	68.4	28.3	134	123.8	51.3	194	179.2	74.2	254	234.7	97.2
15	13.9	05.7	75	69.3	28.7	135	124.7	51.7	195	180.2	74.6	255	235.6	97.6
16	14.8	06.1	76	70.2	29.1	136	125.7	52.0	196	181.1	75.0	256	236.5	98.0
17	15.7	06.5	77	71.1	29.5	137	126.6	52.4	197	182.0	75.4	257	237.4	98.4
18	16.6	06.9	78	72.1	29.9	138	127.5	52.8	198	182.9	75.8	258	238.4	98.7
19	17.6	07.3	79	73.0	30.2	139	128.4	53.2	199	183.9	76.2	259	239.3	99.1
20	18.5	07.7	80	73.9	30.6	140	129.3	53.6	200	184.8	76.5	260	240.2	99.5
21	19.4	08.0	81	74.8	31.0	141	130.3	54.0	201	185.7	76.9	261	241.1	99.9
22	20.3	08.4	82	75.8	31.4	142	131.2	54.3	202	186.6	77.3	262	242.1	100.3
23	21.3	08.8	83	76.7	31.8	143	132.1	54.7	203	187.6	77.7	263	243.0	100.6
24	22.2	09.2	84	77.6	32.1	144	133.0	55.1	204	188.5	78.1	264	243.9	101.0
25	23.1	09.6	85	78.5	32.5	145	134.0	55.5	205	189.4	78.5	265	244.8	101.4
26	24.0	10.0	86	79.5	32.9	146	134.9	55.9	206	190.3	78.8	266	245.8	101.8
27	24.9	10.3	87	80.4	33.3	147	135.8	56.3	207	191.2	79.2	267	246.7	102.2
28	25.9	10.7	88	81.3	33.7	148	136.7	56.6	208	192.2	79.6	268	247.6	102.6
29	26.8	11.1	89	82.2	34.1	149	137.7	57.0	209	193.1	80.0	269	248.5	102.9
30	27.7	11.5	90	83.2	34.4	150	138.6	57.4	210	194.0	80.4	270	249.5	103.3
31	28.6	11.9	91	84.1	34.8	151	139.5	57.8	211	194.9	80.8	271	250.4	103.7
32	29.6	12.2	92	85.0	35.2	152	140.4	58.2	212	195.9	81.1	272	251.3	104.1
33	30.5	12.6	93	85.9	35.6	153	141.4	58.6	213	196.8	81.5	273	252.2	104.5
34	31.4	13.0	94	86.8	36.0	154	142.3	58.9	214	197.7	81.9	274	253.1	104.9
35	32.3	13.4	95	87.8	36.4	155	143.2	59.3	215	198.6	82.3	275	254.1	105.2
36	33.3	13.8	96	88.7	36.7	156	144.1	59.7	216	199.6	82.7	276	255.0	105.6
37	34.2	14.2	97	89.6	37.1	157	145.1	60.1	217	200.5	83.0	277	255.9	106.0
38	35.1	14.5	98	90.5	37.5	158	146.0	60.5	218	201.4	83.4	278	256.8	106.4
39	36.0	14.9	99	91.5	37.9	159	146.9	60.9	219	202.3	83.8	279	257.8	106.8
40	37.0	15.3	100	92.4	38.3	160	147.8	61.2	220	203.3	84.2	280	258.7	107.2
41	37.9	15.7	101	93.3	38.7	161	148.7	61.6	221	204.2	84.6	281	259.6	107.5
42	38.8	16.1	102	94.2	39.0	162	149.7	62.0	222	205.1	85.0	282	260.5	107.9
43	39.7	16.5	103	95.2	39.4	163	150.6	62.4	223	206.0	85.3	283	261.5	108.3
44	40.6	16.8	104	96.1	39.8	164	151.5	62.8	224	207.0	85.7	284	262.4	108.7
45	41.6	17.2	105	97.0	40.2	165	152.4	63.1	225	207.9	86.1	285	263.3	109.1
46	42.5	17.6	106	97.9	40.6	166	153.4	63.5	226	208.8	86.5	286	264.2	109.5
47	43.4	18.0	107	98.9	41.0	167	154.3	63.9	227	209.7	86.9	287	265.2	109.8
48	44.4	18.4	108	99.8	41.3	168	155.2	64.3	228	210.6	87.3	288	266.1	110.2
49	45.3	18.8	109	100.7	41.7	169	156.1	64.7	229	211.6	87.6	289	267.0	110.6
50	46.2	19.1	110	101.6	42.1	170	157.1	65.1	230	212.5	88.0	290	267.9	111.0
51	47.1	19.5	111	102.6	42.5	171	158.0	65.4	231	213.4	88.4	291	268.9	111.4
52	48.0	19.9	112	103.5	42.9	172	158.9	65.8	232	214.3	88.8	292	269.8	111.7
53	49.0	20.3	113	104.4	43.2	173	159.8	66.2	233	215.3	89.2	293	270.7	112.1
54	49.9	20.7	114	105.3	43.6	174	160.8	66.6	234	216.2	89.6	294	271.6	112.5
55	50.8	21.0	115	106.3	44.0	175	161.7	67.0	235	217.1	89.9	295	272.5	112.9
56	51.7	21.4	116	107.2	44.4	176	162.6	67.4	236	218.0	90.3	296	273.5	113.3
57	52.7	21.8	117	108.1	44.8	177	163.5	67.7	237	219.0	90.7	297	274.4	113.7
58	53.6	22.2	118	109.0	45.2	178	164.5	68.1	238	219.9	91.1	298	275.3	114.0
59	54.5	22.6	119	109.9	45.5	179	165.4	68.5	239	220.8	91.5	299	276.2	114.4
60	55.4	23.0	120	110.9	45.9	180	166.3	68.9	240	221.7	91.8	300	277.2	114.8
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.9	00.4	61	55.1	26.1	121	109.4	51.7	181	163.6	77.4	241	217.9	103.0
2	01.8	00.9	62	56.0	26.5	122	110.3	52.2	182	164.5	77.8	242	218.8	103.5
3	02.7	01.3	63	57.0	26.9	123	111.2	52.6	183	165.4	78.3	243	219.7	103.9
4	03.6	01.7	64	57.9	27.4	124	112.1	53.0	184	166.3	78.7	244	220.6	104.3
5	04.5	02.1	65	58.8	27.8	125	113.0	53.5	185	167.2	79.1	245	221.5	104.8
6	05.4	02.6	66	59 7	28.2	126	113.9	53.9	186	168.1	79.5	246	222.4	105.2
7	06.3	03.0	67	60.6	28.6	127	114.8	54.3	187	169.0	80.0	247	223.3	105 6
8	07.2	03.4	68	61.5	29.1	128	115.7	54.7	188	169.9	80.4	248	224.2	106.0
9	08.1	03.8	69	62.4	29 5	129	116.6	55.2	189	170.9	80.8	249	225.1	106.5
10	09.0	04.3	70	63.3	29.9	130	117.5	55.6	190	171.8	81.2	250	226.0	106.9
11	09.9	04.7	71	64.2	30.4	131	118.4	56.0	191	172.7	81.7	251	226.9	107.3
12	10.8	05.1	72	65.1	30.8	132	119.3	56.4	192	173.6	82.1	252	227.8	107.8
13	11.8	05.6	73	66.0	31.2	133	120.2	56.9	193	174.5	82.5	253	228.7	108.2
14	12.7	06.0	74	66.9	31.6	134	121.1	57.3	194	175.4	83.0	254	229.6	108.6
15	13.6	06.4	75	67.8	32.1	135	122.0	57.7	195	176.3	83.4	255	230.5	109.0
16	14.5	06.8	76	68.7	32.5	136	122.9	58.2	196	177.2	83.8	256	231.4	109.5
17	15.4	07.3	77	69.6	32.9	137	123.8	58.6	197	178.1	84.2	257	232.3	109.9
18	16.3	07.7	78	70.5	33.4	138	124.7	59.0	198	179.0	84.7	258	233.2	110.3
19	17.2	08.1	79	71.4	33.8	139	125.7	59.4	199	179.9	85.1	259	234.1	110.7
20	18.1	08.6	80	72.3	34.2	140	126.6	59.9	200	180.8	85.5	260	235.0	111.2
21	19.0	09.0	81	73.2	34.6	141	127.5	60.3	201	181.7	85.9	261	235.9	111.6
22	19.9	09.4	82	74.1	35.1	142	128.4	60.7	202	182.6	86.4	262	236.8	112.0
23	20.8	09.8	83	75.0	35.5	143	129.3	61.2	203	183.5	86.8	263	237.7	112.5
24	21.7	10.3	84	75.9	35.9	144	130.2	61.6	204	184.4	87.2	264	238.7	112.9
25	22.6	10.7	85	76.8	36.3	145	131.1	62.0	205	185.3	87.7	265	239.6	113.3
26	23.5	11.1	86	77.7	36.8	146	132.0	62.4	206	186.2	88.1	266	240.5	113.7
27	24.4	11.5	87	78.6	37.2	147	132.9	62.9	207	187.1	88.5	267	241.4	114.2
28	25.3	12.0	88	79.6	37.6	148	133.8	63.3	208	188 0	88.9	268	242.3	114.6
29	26.2	12.4	89	80.5	38.1	149	134.7	63.7	209	188.9	89.4	269	243.2	115.0
30	27.1	12.8	90	81.4	38.5	150	135.6	64.1	210	189.8	89.8	270	244.1	115.4
31	28.0	13.3	91	82.3	38.9	151	136.5	64.6	211	190.7	90.2	271	245.0	115.9
32	28.9	13.7	92	83.2	39.3	152	137.4	65.0	212	191.6	90.6	272	245.9	116.3
33	29.8	14.1	93	84.1	39.8	153	138.3	65.4	213	192.6	91.1	273	246.8	116.7
34	30.7	14.5	94	85.0	40.2	154	139.2	65.9	214	193.5	91.5	274	247.7	117.2
35	31.6	15.0	95	85.9	40.6	155	140.1	66.3	215	194.4	91.9	275	248.6	117.6
36	32.5	15.4	96	86.8	41.1	156	141.0	66.7	216	195.3	92.4	276	249.5	118.0
37	33.4	15.8	97	87.7	41.5	157	141.9	67.1	217	196.2	92.8	277	250.4	118.4
38	34.4	16.2	98	88.6	41.9	158	142.8	67.6	218	197.1	93.2	278	251.3	118.9
39	35.3	16.7	99	89.5	42.3	159	143.7	68.0	219	198.0	93.6	279	252.2	119.3
40	36.2	17.1	100	90.4	42.8	160	144.6	68.4	220	198.9	94.1	280	253.1	119.7
41	37.1	17.5	101	91.3	43.2	161	145.5	68.8	221	199.8	94.5	281	254.0	120.2
42	38.0	18.0	102	92.2	43.6	162	146.4	69.3	222	200.7	94.9	282	254.9	120.6
43	38.9	18.4	103	93.1	44.0	163	147.3	69.7	223	201.6	95.4	283	255.8	121.0
44	39.8	18.8	104	94.0	44.5	164	148.3	70.1	224	202.5	95.8	284	256.7	121.4
45	40.7	19.2	105	94.9	44.9	165	149.2	70.6	225	203.4	96.2	285	257.6	121.9
46	41.6	19.7	106	95.8	45.3	166	150.1	71.0	226	204.3	96.6	286	258.5	122.3
47	42.5	20.1	107	96.7	45.8	167	151.0	71.4	227	205.2	97.1	287	259.4	122.7
48	43.4	20.5	103	97.6	46.2	168	151.9	71.8	228	206.1	97.5	288	260.3	123.1
49	44.3	21.0	109	98.5	46.6	169	152.8	72.3	229	207.0	97.9	289	261.3	123.6
50	45.2	21.4	110	99.4	47.0	170	153.7	72.7	230	207.9	98.3	290	262.2	124.0
51	46.1	21.8	111	100.3	47.5	171	154.6	73.1	231	208.8	98.8	291	263.1	124.4
52	47.0	22.2	112	101.2	47.9	172	155.5	73.6	232	209.7	99.2	292	264.0	124.9
53	47.9	22.7	113	102.1	48.3	173	156.4	74.0	233	210.6	99.6	293	264.9	125.3
54	48.8	23.1	114	103.1	48.7	174	157.3	74.4	234	211.5	100.1	294	265.8	125.7
55	49.7	23.5	115	104.0	49.2	175	158.2	74.8	235	212.4	100.5	295	266.7	126.1
56	50.6	23.9	116	104.9	49.6	176	159.1	75.3	236	213.3	100.9	296	267.6	126.6
57	51.5	24.4	117	105.8	50.0	177	160.0	75.7	237	214.2	101.3	297	268.5	127.0
58	52.4	24.8	118	106.7	50.5	178	160.9	76.1	238	215.1	101.8	298	269.4	127.4
59	53.3	25.2	119	107.6	50.9	179	161.8	76.5	239	216.1	102.2	299	270.3	127.8
60	54.2	25.7	120	108.5	51.3	180	162.7	77.0	240	217.0	102.6	300	271.2	128.3
Dist	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.9	00.5	61	53.8	28.8	121	106.7	57.0	181	159.6	85.3	241	212.5	113.6
2	01.8	00.9	62	54.7	29.2	122	107.6	57.5	182	160.5	85.8	242	213.4	114.1
3	02.6	01.4	63	55.6	29.7	123	108.5	58.0	183	161.4	86.3	243	214 3	114.6
4	03.5	01.9	64	56.4	30.2	124	109.4	58.4	184	162.3	86.7	244	215 2	115.0
5	04.4	02.4	65	57.3	30.6	125	110.2	58.9	185	163.2	87.2	245	216.1	115.5
6	05.3	02.8	66	58.2	31.1	126	111.1	59.4	186	164.0	87.7	246	217.0	116.0
7	06.2	03.3	67	59.1	31.6	127	112.0	59.9	187	164.9	88.1	247	217.8	116.4
8	07.1	03.8	68	60.0	32.1	128	112.9	60.3	188	165.8	88.6	248	218.7	116.9
9	07.9	04.2	69	60.9	32.5	129	113.8	60.8	189	166.7	89.1	249	219.6	117.4
10	08.8	04.7	70	61.7	33.0	130	114.7	61.3	190	167.6	89.6	250	220.5	117.8
11	09.7	05.2	71	62.6	33.5	131	115.5	61.7	191	168.5	90.0	251	221.4	118.3
12	10.6	05.7	72	63.5	33.9	132	116.4	62.2	192	169.3	90.5	252	222.2	118.8
13	11.5	06.1	73	64.4	34 4	133	117.3	62.7	193	170.2	91.0	253	223.1	119.3
14	12.3	06.6	74	65 3	34.9	134	118 2	63.2	194	171.1	91.4	254	224.0	119.7
15	13.2	07.1	75	66 1	35.4	135	119.1	63.6	195	172.0	91.9	255	224.9	120.2
16	14.1	07.5	76	67 0	35 8	136	119.9	64.1	196	172.9	92.4	256	225.8	120.7
17	15.0	08.0	77	67.9	36.3	137	120.8	64.6	197	173.7	92 9	257	226.7	121.1
18	15.9	08.5	78	68 8	36.8	138	121.7	65.0	198	174.6	93.3	258	227.5	121.6
19	16.8	09.0	79	69.7	37.2	139	122.6	65.6	199	175.5	93.8	259	228.4	122.1
20	17.6	09.4	80	70.6	37.7	140	123.5	66.0	200	176.4	94.3	260	229.3	122.6
21	18.5	09.9	81	71.4	38.2	141	124.4	66.5	201	177.3	94.7	261	230.2	123.0
22	19.4	10.4	82	72.3	38.6	142	125.2	66.9	202	178.2	95.2	262	231.1	123.5
23	20.3	10.8	83	73.2	39.1	143	126.1	67.4	203	179.0	95.7	263	231.9	124.0
24	21.2	11.3	84	74.1	39.6	144	127.0	67.9	204	179.9	96.2	264	232.8	124.4
25	22.1	11.8	85	75.0	40.1	145	127.9	68.3	205	180.8	96.6	265	233.7	124.9
26	22.9	12.3	86	75.9	40.5	146	128.8	68.8	206	181.7	97.1	266	234.6	125.4
27	23.8	12.7	87	76 7	41.0	147	129.6	69.3	207	182.6	97.6	267	235.5	125.9
28	24.7	13.2	88	77 6	41.5	148	130.5	69.8	208	183.4	98.0	268	236.4	126.3
29	25.6	13.7	89	78.5	41.9	149	131.4	70.2	209	184.3	98.5	269	237.2	126.8
30	26.5	14.1	90	79.4	42.4	150	132.3	70.7	210	185.2	99.0	270	238.1	127.3
31	27.3	14.6	91	80.3	42.9	151	133.2	71.2	211	186.1	99.5	271	239.0	127.7
32	28.2	15.1	92	81.1	43.4	152	134.1	71.6	212	187.0	99.9	272	239.9	128.2
33	29.1	15.6	93	82.0	43.8	153	134.9	72.1	213	187.8	100.4	273	240.8	128.7
34	30.0	16.0	94	82.9	44.3	154	135.8	72.6	214	188.7	100.9	274	241.7	129.2
35	30.9	16.5	95	83.8	44.8	155	136.7	73.1	215	189.6	101.3	275	242.5	129.6
36	31.8	17.0	96	84.7	45.2	156	137.6	73.5	216	190.5	101.8	276	243 4	130.1
37	32.6	17.4	97	85.6	45.7	157	138.5	74.0	217	191.4	102 3	277	244.3	130.6
38	33.5	17.9	98	86.4	46.2	158	139.3	74.5	218	192.3	102.8	278	245.2	131.0
39	34.4	18.4	99	87.3	46.7	159	140.2	74.9	219	193.1	103.2	279	246.1	131.5
40	35.3	18.9	100	88.2	47.1	160	141.1	75.4	220	194.0	103 7	280	246.9	132.0
41	36.2	19.3	101	89.1	47.6	161	142.0	75.9	221	194.9	104.2	281	247.8	132.5
42	37.0	19.8	102	90.0	48.1	162	142.9	76.4	222	195.8	104.6	282	248.7	132.9
43	37.9	20.3	103	90.8	48.5	163	143.8	76.8	223	196.7	105.1	283	249.6	133.4
44	38.8	20.7	104	91.7	49.0	164	144.6	77.3	224	197.6	105.6	284	250.5	133.9
45	39.7	21.2	105	92.6	49.5	165	145.5	77.8	225	198.4	106.1	285	251.4	134.3
46	40.6	21.7	106	93.5	50.0	166	146.4	78.2	226	199.3	106.5	286	252.2	134.8
47	41.5	22.2	107	94.4	50.4	167	147.3	78.7	227	200.2	107.0	287	253.1	135.3
48	42.3	22.6	108	95.3	50.9	168	148.2	79.2	228	201.1	107.5	288	254.0	135.8
49	43.2	23.1	109	96.1	51.4	169	149.0	79.7	229	202.0	107.9	289	254.9	136.2
50	44.1	23.6	110	97.0	51.8	170	149.9	80.1	230	202 8	108 4	290	255.8	136.7
51	45.0	24.0	111	97.9	52.3	171	150.8	80.6	231	203.7	108.9	291	256.6	137.2
52	45.9	24.5	112	98.8	52.8	172	151.7	81.1	232	204.6	109.4	292	257.5	137.6
53	46.7	25.0	113	99.7	53.3	173	152.6	81.5	233	205.5	109.8	293	258.4	138.1
54	47.6	25.5	114	100.5	53.7	174	153.5	82.0	234	206.4	110.3	294	259.3	138.6
55	48.5	25.9	115	101.4	54.2	175	154.3	82.5	235	207.3	110.8	295	260.2	139.1
56	49.4	26.4	116	102.3	54.7	176	155.2	83.0	236	208.1	111.2	296	261.1	139.5
57	50.3	26.9	117	103.2	55.1	177	156.1	83.4	237	209.0	111.7	297	261.9	140.0
58	51.2	27.3	118	104.1	55.6	178	157.0	83.9	238	209.9	112.2	298	262 8	140.5
59	52.0	27.8	119	105.0	56.1	179	157.9	84.4	239	210.8	112.7	299	263.7	140.9
60	52.9	28.3	120	105.8	56.6	180	158.8	84.8	240	211.7	113.1	300	264.6	141.4
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Difference of Latitude and Departure for 5½ Points.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.9	00.5	61	52.3	31.4	121	103.8	62.2	181	155.3	93.0	241	206.7	123.9
2	01.7	01.0	62	53.2	31.9	122	104.6	62.7	182	156.1	93.6	242	207.6	124.4
3	02.6	01.5	63	54.0	32.4	123	105.5	63.2	183	157.0	94.1	243	208.4	124.9
4	03.4	02.1	64	54.9	32.9	124	106.4	63.7	184	157.8	94.6	244	209.3	125.4
5	04.3	02.6	65	55.8	33.4	125	107.2	64.3	185	158.7	95.1	245	210.1	125.9
6	05.1	03.1	66	56.6	33.9	126	108.1	64.8	186	159.5	95.6	246	211.0	126.5
7	06.0	03.6	67	57.5	34.4	127	108.9	65.3	187	160.4	96.1	247	211.9	127.0
8	06.9	04.1	68	58.3	35.0	128	109.8	65.8	188	161.2	96.6	248	212.7	127.5
9	07.7	04.6	69	59.2	35.5	129	110.6	66.3	189	162.1	97.2	249	213.6	128.0
10	08.6	05.1	70	60.0	36.0	130	111.5	66.8	190	163.0	97.7	250	214.4	128.5
11	09.4	05.7	71	60.9	36.5	131	112.4	67.3	191	163.8	98.2	251	215.3	129 0
12	10.3	06.2	72	61.8	37.0	132	113.2	67.9	192	164.7	98.7	252	216.1	129.5
13	11.2	06.7	73	62.6	37.5	133	114.1	68.4	193	165.5	99.2	253	217.0	130.1
14	12.0	07.2	74	63.5	38.0	134	114.9	68.9	194	166.4	99.7	254	217.9	130.6
15	12.9	07.7	75	64.3	38.6	135	115.8	69.4	195	167.3	100.2	255	218.7	131.1
16	13.7	08.2	76	65.2	39.1	136	116.6	69.9	196	168.1	100.8	256	219.6	131.6
17	14.6	08.7	77	66.0	39.6	137	117.5	70.4	197	169.0	101.3	257	220.4	132.1
18	15.4	09.3	78	66.9	40.1	138	118.4	70.9	198	169.8	101.8	258	221.3	132.6
19	16.3	09.8	79	67.8	40.6	139	119.2	71.5	199	170.7	102.3	259	222.1	133.1
20	17.2	10.3	80	68.6	41.1	140	120.1	72.0	200	171.5	102.8	260	223.0	133.7
21	18.0	10.8	81	69.5	41.6	141	120.9	72.5	201	172.4	103.3	261	223.9	134.2
22	18.9	11.3	82	70.3	42.2	142	121.8	73.0	202	173.3	103.8	262	224.7	134.7
23	19.7	11.8	83	71.2	42.7	143	122.7	73.5	203	174.1	104.4	263	225.6	135.2
24	20.6	12.3	84	72.0	43 2	144	123.5	74.0	204	175.0	104.9	264	226.4	135.7
25	21.4	12.9	85	72.9	43.7	145	124.4	74.5	205	175.8	105.4	265	227.3	136.2
26	22.3	13.4	86	73.8	44.2	146	125.2	75.1	206	176.7	105.9	266	228.2	136.7
27	23.2	13.9	87	74.6	44.7	147	126.1	75.6	207	177.5	106.4	267	229.0	137.3
28	24.0	14.4	88	75.5	45.2	148	126.9	76.1	208	178.4	106.9	268	229.9	137.8
29	24.9	14.9	89	76.3	45.7	149	127.8	76.6	209	179.3	107.4	269	230.7	138.3
30	25.7	15.4	90	77.2	46.3	150	128.7	77.1	210	180.1	108.0	270	231.6	138.8
31	26.6	15.9	91	78.1	46.8	151	129.5	77.6	211	181.0	108.5	271	232.4	139.3
32	27.4	16.4	92	78.9	47.3	152	130.4	78.1	212	181.8	109.0	272	233.3	139.8
33	28.3	17.0	93	79.8	47.8	153	131.2	78.7	213	182.7	109.5	273	234.2	140.3
34	29.2	17.5	94	80.6	48.3	154	132.1	79.2	214	183.5	110.0	274	235.0	140.9
35	30.0	18.0	95	81.5	48.8	155	132.9	79.7	215	184.4	110.5	275	235.9	141.4
36	30.9	18.5	96	82.3	49.3	156	133.8	80.2	216	185.3	111.0	276	236.7	141.9
37	31.7	19.0	97	83.2	49.9	157	134.7	80.7	217	186.1	111.6	277	237.6	142.4
38	32.6	19.5	98	84.1	50.4	158	135.5	81.2	218	187.0	112.1	278	238.4	142.9
39	33.5	20.0	99	84.9	50.9	159	136.4	81.7	219	187.8	112.6	279	239.3	143.4
40	34.3	20.6	100	85.8	51.5	160	137.2	82.3	220	188.7	113.1	280	240.2	143.9
41	35.2	21.1	101	86.6	51.9	161	138.1	82.8	221	189.6	113.6	281	241.0	144.5
42	36.0	21.6	102	87.5	52.4	162	138.9	83.3	222	190.4	114.1	282	241.9	145.0
43	36.9	22.1	103	88.3	52.9	163	139.8	83.8	223	191.3	114.6	283	242.7	145.5
44	37.7	22.6	104	89.2	53.5	164	140.7	84.3	224	192.1	115.2	284	243.6	146.0
45	38.6	23.1	105	90.1	54.0	165	141.5	84.8	225	193.0	115.7	285	244.4	146.5
46	39.5	23.6	106	90.9	54.5	166	142.4	85.3	226	193.8	116.2	286	245.3	147.0
47	40.3	24.2	107	91.8	55.0	167	143.2	85.8	227	194.7	116.7	287	246.2	147.5
48	41.2	24.7	108	92.6	55.5	168	144.1	86.4	228	195.6	117.2	288	247.0	148.1
49	42.0	25.2	109	93.5	56.0	169	145.0	86.9	229	196.4	117.7	289	247.9	148.6
50	42.9	25.7	110	94.3	56.5	170	145.8	87.4	230	197.3	118.2	290	248.7	149.1
51	43.7	26.2	111	95.2	57.1	171	146.7	87.9	231	198.1	118.8	291	249.6	149.6
52	44.6	26.7	112	96.1	57.6	172	147.5	88.4	232	199.0	119.3	292	250.5	150.1
53	45.5	27.2	113	96.9	58.1	173	148.4	88.9	233	199.8	119.8	293	251.3	150.6
54	46.3	27.8	114	97.8	58.6	174	149.2	89.4	234	200.7	120.3	294	252.2	151.1
55	47.2	28.3	115	98.6	59.1	175	150.1	90.0	235	201.6	120.8	295	253.0	151.7
56	48.0	28.8	116	99.5	59.6	176	151.0	90.5	236	202.4	121.3	296	253.9	152.2
57	48.9	29.3	117	100.4	60.1	177	151.8	91.0	237	203.3	121.8	297	254.7	152.7
58	49.7	29.8	118	101.2	60.7	178	152.7	91.5	238	204.1	122.4	298	255.6	153.2
59	50.6	30.3	119	102.1	61.2	179	153.5	92.0	239	205.0	122.9	299	256.5	153.7
60	51.5	30.8	120	102.9	61.7	180	154.4	92.5	240	205.9	123.4	300	257.3	154.2
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.8	00.6	61	50.7	33.9	121	100.6	67.2	181	150.5	100.6	241	200.4	133.9
2	01.7	01.1	62	51.5	34.4	122	101.4	67.8	182	151.3	101.1	242	201.2	134.4
3	02.5	01.7	63	52.4	35.0	123	102.3	68.3	183	152.2	101.7	243	202.0	135.0
4	03.3	02.2	64	53.2	35.6	124	103.1	68.9	184	153.0	102.2	244	202.9	135.6
5	04.2	02.8	65	54.0	36.1	125	103.9	69.4	185	153.8	102.8	245	203.7	136.1
6	05.0	03.3	66	54.9	36.7	126	104.8	70.0	186	154.6	103.3	246	204.5	136.7
7	05.8	03.9	67	55.7	37.2	127	105.6	70.6	187	155.5	103.9	247	205.4	137.2
8	06.7	04.4	68	56.5	37.8	128	106.4	71.1	188	156.3	104.4	248	206.2	137.8
9	07.5	05.0	69	57.4	38.3	129	107.3	71.7	189	157.1	105.0	249	207.0	138.3
10	08.3	05.6	70	58.2	38.9	130	108.1	72.2	190	158.0	105.6	250	207.9	138.9
11	09.1	06.1	71	59.0	39.4	131	108.9	72.8	191	158.8	106.1	251	208.7	139.4
12	10.0	06.7	72	59.9	40.0	132	109.7	73.3	192	159.6	106.7	252	209.5	140.0
13	10.8	07.2	73	60.7	40.6	133	110.6	73.9	193	160.5	107.2	253	210.4	140.6
14	11.6	07.8	74	61.5	41.1	134	111.4	74.4	194	161.3	107.8	254	211.2	141.1
15	12.5	08.3	75	62.4	41.7	135	112.2	75.0	195	162.1	108.3	255	212.0	141.7
16	13.3	08.9	76	63.2	42.2	136	113.1	75.6	196	163.0	108.9	256	212.9	142.2
17	14.1	09.4	77	64.0	42.8	137	113.9	76.1	197	163.8	109.4	257	213.7	142.8
18	15.0	10.0	78	64.8	43.3	138	114.7	76.7	198	164.6	110.0	258	214.5	143.3
19	15.8	10.6	79	65.7	43.9	139	115.6	77.2	199	165.5	110.6	259	215.3	143.9
20	16.6	11.1	80	66.5	44.4	140	116.4	77.8	200	166.3	111.1	260	216.2	144.4
21	17.5	11.7	81	67.3	45.0	141	117.2	78.3	201	167.1	111.7	261	217.0	145 0
22	18.3	12.2	82	68.2	45.6	142	118.1	78.9	202	168.0	112.2	262	217.8	145.6
23	19.1	12.8	83	69.0	46.1	143	118.9	79.4	203	168.8	112.8	263	218.7	146 1
24	20.0	13.3	84	69.8	46.7	144	119.7	80.0	204	169.6	113.3	264	219.5	146.7
25	20.8	13.9	85	70.7	47.2	145	120.6	80.6	205	170.4	113.9	265	220.3	147.2
26	21.6	14.4	86	71.5	47 8	146	121.4	81.1	206	171.3	114.4	266	221.2	147.8
27	22.4	15.0	87	72.3	48.3	147	122.2	81.7	207	172.1	115.0	267	222.0	148.3
28	23.3	15.6	88	73.2	48.9	148	123.1	82.2	208	172.9	115.6	268	222.8	148.9
29	24.1	16.1	89	74.0	49.4	149	123.9	82.8	209	173.8	116.1	269	223.7	149.4
30	24.9	16.7	90	74.8	50.0	150	124.7	83.3	210	174.6	116.7	270	224.5	150.0
31	25.8	17.2	91	75.7	50.6	151	125.5	83.9	211	175.4	117.2	271	225 3	150.6
32	26.6	17.8	92	76.5	51.1	152	126.4	84.4	212	176.3	117.8	272	226.2	151.1
33	27.4	18.3	93	77.3	51.7	153	127.2	85.0	213	177.1	118.3	273	227.0	151.7
34	28.3	18.9	94	78.2	52.2	154	128.0	85.6	214	177.9	118.9	274	227.8	152.2
35	29.1	19.4	95	79.0	52.8	155	128.9	86.1	215	178.8	119.4	275	228.6	152.8
36	29.9	20.0	96	79.8	53.3	156	129.7	86.7	216	179.6	120.0	276	229.5	153.3
37	30.8	20.6	97	80.6	53.9	157	130.5	87.2	217	180.4	120.6	277	230.3	153.9
38	31.6	21.1	98	81.5	54.4	158	131.4	87.8	218	181.3	121.1	278	231.1	154.4
39	32.4	21.7	99	82.3	55.0	159	132.2	88.3	219	182.1	121.7	279	232.0	155.0
40	33.3	22.2	100	83.1	55.6	160	133.0	88.9	220	182.9	122.2	280	232.8	155.6
41	34.1	22.8	101	84.0	56.1	161	133.9	89.4	221	183.7	122.8	281	233.6	156.1
42	34.9	23.3	102	84.8	56.7	162	134.7	90.0	222	184.6	123.3	282	234.5	156.7
43	35.8	23.9	103	85.6	57.2	163	135.5	90.6	223	185.4	123.9	283	235.3	157.2
44	36.6	24.4	104	86.5	57.8	164	136.4	91.1	224	186.2	124.4	284	236.1	157.8
45	37.4	25.0	105	87.3	58.3	165	137.2	91.7	225	187.1	125.0	285	237.0	158.3
46	38.2	25.6	106	88.1	58.9	166	138.0	92.2	226	187.9	125.6	286	237.8	158.9
47	39.1	26.1	107	89.0	59.4	167	138.9	92.8	227	188.7	126.1	287	238.6	159.4
48	39.9	26.7	108	89.8	60.0	168	139.7	93.3	228	189.6	126.7	288	239.5	160.0
49	40.7	27.2	109	90.6	60.6	169	140.5	93.9	229	190.4	127.2	289	240.3	160.6
50	41.6	27.8	110	91.5	61.1	170	141.3	94.4	230	191.2	127.8	290	241.1	161.1
51	42.4	28.3	111	92.3	61.7	171	142.2	95.0	231	192.1	128.3	291	242.0	161.7
52	43.2	28.9	112	93.1	62.2	172	143.0	95.6	232	192.9	128.9	292	242.8	162.2
53	44.1	29.4	113	94.0	62.8	173	143.8	96.1	233	193.7	129.4	293	243.6	162.8
54	44.9	30.0	114	94.8	63.3	174	144.7	96.7	234	194.6	130.0	294	244.4	163.4
55	45.7	30.6	115	95.6	63.9	175	145.5	97.2	235	195.4	130.6	295	245.3	163.9
56	46.6	31.1	116	96.4	64.4	176	146.3	97.8	236	196.2	131.1	296	246.1	164.4
57	47.4	31.7	117	97.3	65.0	177	147.2	98.3	237	197.1	131.7	297	246.9	165.0
58	48.2	32.2	118	98.1	65.6	178	148.0	98.9	238	197.9	132.2	298	247.8	165.6
59	49.1	32.8	119	98.9	66.1	179	148.8	99.4	239	198.7	132.8	299	248.6	166.1
60	49.9	33.3	120	99.8	66 7	180	149.7	100.0	240	199.5	133.3	300	249.4	166.7
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.8	00.6	61	49.0	36.3	121	97.2	72.1	181	145.4	107.8	241	193.6	143.6
2	01.6	01.2	62	49.8	36.9	122	98.0	72.7	182	146.2	108.4	242	194.4	144.2
3	02.4	01.8	63	50.6	37.5	123	98.8	73.3	183	147.0	109.0	243	195.2	144.8
4	03.2	02.4	64	51.4	38.1	124	99.6	73.9	184	147.8	109.6	244	196.0	145.4
5	04.0	03.0	65	52.2	38.7	125	100.4	74.5	185	148.6	110.2	245	196.8	146.0
6	04.8	03.6	66	53.0	39.3	126	101.2	75.1	186	149.4	110.8	246	197.6	146.5
7	05.6	04.2	67	53.8	39.9	127	102.0	75.7	187	150.2	111.4	247	198.4	147.1
8	06.4	04.8	68	54.6	40.5	128	102.8	76.3	188	151.0	112.0	248	199.2	147.7
9	07.2	05.4	69	55.4	41.1	129	103.6	76.9	189	151.8	112.6	249	200.0	148.3
10	08.0	06.0	70	56.2	41.7	130	104.4	77.4	190	152.6	113.2	250	200.8	148.9
11	08.8	06.6	71	57.0	42.3	131	105.2	78.0	191	153.4	113.8	251	201.6	149.5
12	09.6	07.1	72	57.8	42.9	132	106.0	78.6	192	154.2	114.4	252	202.4	150.1
13	10.4	07.7	73	58.6	43.5	133	106.8	79.2	193	155.0	115.0	253	203.2	150.7
14	11.2	08.3	74	59.4	44.1	134	107.6	79.8	194	155.8	115.6	254	204.0	151.3
15	12.0	08.9	75	60.2	44.7	135	108.4	80.4	195	156.6	116.2	255	204.8	151.9
16	12.8	09.5	76	61.0	45.3	136	109.2	81.0	196	157.4	116.8	256	205.6	152.5
17	13.7	10.1	77	61.8	45.9	137	110.0	81.6	197	158.2	117.4	257	206.4	153.1
18	14.5	10.7	78	62.6	46.5	138	110.8	82.2	198	159.0	118.0	258	207.2	153.7
19	15.3	11.3	79	63.4	47.1	139	111.6	82.8	199	159.8	118.5	259	208.0	154.3
20	16.1	11.9	80	64.3	47.7	140	112.4	83.4	200	160.6	119.1	260	208.8	154.9
21	16.9	12.5	81	65.1	48.3	141	113.2	84.0	201	161.4	119.7	261	209.6	155.5
22	17.7	13.1	82	65.9	48.9	142	114.0	84.6	202	162.2	120.3	262	210.4	156.1
23	18.5	13.7	83	66.7	49.4	143	114.9	85.2	203	163.0	120.9	263	211.2	156.7
24	19.3	14.3	84	67.5	50.0	144	115.7	85.8	204	163.9	121.5	264	212.0	157.3
25	20.1	14.9	85	68.3	50.6	145	116.5	86.4	205	164.7	122.1	265	212.8	157.9
26	20.9	15.5	86	69.1	51.2	146	117.3	87.0	206	165.5	122.7	266	213.6	158.5
27	21.7	16.1	87	69.9	51.8	147	118.1	87.6	207	166.3	123.3	267	214.5	159.1
28	22.5	16.7	88	70.7	52.4	148	118.9	88.2	208	167.1	123.9	268	215.3	159.6
29	23.3	17.3	89	71.5	53.0	149	119.7	88.8	209	167.9	124.5	269	216.1	160.2
30	24.1	17.9	90	72.3	53.6	150	120.5	89.4	210	168.7	125.1	270	216.9	160.8
31	24.9	18.5	91	73.1	54.2	151	121.3	90.0	211	169.5	125.7	271	217.7	161.4
32	25.7	19.1	92	73.9	54.8	152	122.1	90.5	212	170.3	126.3	272	218.5	162.0
33	26.5	19.7	93	74.7	55.4	153	122.9	91.1	213	171.1	126.9	273	219.3	162.6
34	27.3	20.3	94	75.5	56.0	154	123.7	91.7	214	171.9	127.5	274	220.1	163.2
35	28.1	20.9	95	76.3	56.6	155	124.5	92.3	215	172.7	128.1	275	220.9	163.8
36	28.9	21.4	96	77.1	57.2	156	125.3	92.9	216	173.5	128.7	276	221.7	164.4
37	29.7	22.0	97	77.9	57.8	157	126.1	93.5	217	174.3	129.3	277	222.5	165.0
38	30.5	22.6	98	78.7	58.4	158	126.9	94.1	218	175.1	129.9	278	223.3	165.6
39	31.3	23.2	99	79.5	59.0	159	127.7	94.7	219	175.9	130.5	279	224.1	166.2
40	32.1	23.8	100	80.3	59.6	160	128.5	95.3	220	176.7	131.1	280	224.9	166.8
41	32.9	24.4	101	81.1	60.2	161	129.3	95.9	221	177.5	131.7	281	225.7	167.4
42	33.7	25.0	102	81.9	60.8	162	130.1	96.5	222	178.3	132.2	282	226.5	168.0
43	34.5	25.6	103	82.7	61.4	163	130.9	97.1	223	179.1	132.8	283	227.3	168.6
44	35.3	26.2	104	83.5	62.0	164	131.7	97.7	224	179.9	133.4	284	228.1	169.2
45	36.1	26.8	105	84.3	62.6	165	132.5	98.3	225	180.7	134.0	285	228.9	169.8
46	36.9	27.4	106	85.1	63.1	166	133.3	98.9	226	181.5	134.6	286	229.7	170.4
47	37.7	28.0	107	85.9	63.7	167	134.1	99.5	227	182.3	135.2	287	230.5	171.0
48	38.6	28.6	108	86.7	64.3	168	134.9	100.1	228	183.1	135.8	288	231.3	171.6
49	39.4	29.2	109	87.5	64.9	169	135.7	100.7	229	183.9	136.4	289	232.1	172.2
50	40.2	29.8	110	88.4	65.5	170	136.5	101.3	230	184.7	137.0	290	232.9	172.8
51	41.0	30.4	111	89.2	66.1	171	137.3	101.9	231	185.5	137.6	291	233.7	173.3
52	41.8	31.0	112	90.0	66.7	172	138.1	102.5	232	186.3	138.2	292	234.5	173.9
53	42.6	31.6	113	90.8	67.3	173	138.9	103.1	233	187.1	138.8	293	235.3	174.5
54	43.4	32.2	114	91.6	67.9	174	139.8	103.7	234	187.9	139.4	294	236.1	175.1
55	44.2	32.8	115	92.4	68.5	175	140.6	104.2	235	188.8	140.0	295	236.9	175.7
56	45.0	33.4	116	93.2	69.1	176	141.4	104.8	236	189.6	140.6	296	237.7	176.3
57	45.8	34.0	117	94.0	69.7	177	142.2	105.4	237	190.4	141.2	297	238.5	176.9
58	46.6	34.6	118	94.8	70.3	178	143.0	106.0	238	191.2	141.8	298	239.4	177.5
59	47.4	35.1	119	95.6	70.9	179	143.8	106.6	239	192.0	142.4	299	240.2	178.1
60	48.2	35.7	120	96.4	71.5	180	144.6	107.2	240	192.8	143.0	300	241.0	178.7
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.8	00.6	61	47.1	38.7	121	93.5	76.8	181	139.9	114.8	241	186.3	152.9
2	01.5	01.3	62	47.9	39.3	122	94.3	77.4	182	140.7	115.5	242	187.1	153.5
3	02.3	01.9	63	48.7	40.0	123	95.1	78.0	183	141.5	116.1	243	187.8	154.2
4	03.1	02.5	64	49.5	40.6	124	95.8	78.7	184	142.2	116.7	244	188.6	154.8
5	03.9	03.2	65	50.2	41.2	125	96.6	79.3	185	143.0	117.4	245	189.4	155.4
6	04.6	03.8	66	51.0	41.9	126	97.4	79.9	186	143.8	118.0	246	190.2	156.1
7	05.4	04.4	67	51.8	42.5	127	98.2	80.6	187	144.5	118.6	247	190.9	156.7
8	06.2	05.1	68	52.6	43.1	128	98.9	81.2	188	145.3	119.3	248	191.7	157.3
9	07.0	05.7	69	53.3	43.8	129	99.7	81.8	189	146.1	119.9	249	192.5	158.0
10	07.7	06.3	70	54.1	44.4	130	100.5	82.5	190	146.9	120.5	250	193.2	158.6
11	08.5	07.0	71	54.9	45.0	131	101.3	83.1	191	147.6	121.2	251	194.0	159.2
12	09.3	07.6	72	55.7	45.7	132	102.0	83.7	192	148.4	121.8	252	194.8	159.9
13	10.1	08.2	73	56.4	46.3	133	102.8	84.4	193	149.2	122.4	253	195.6	160.5
14	10.8	08.9	74	57.2	46.9	134	103.6	85.0	194	150.0	123.1	254	196.3	161.1
15	11.6	09.5	75	58.0	47.6	135	104.4	85.6	195	150.7	123.7	255	197.1	161.8
16	12.4	10.1	76	58.7	48.2	136	105.1	86.3	196	151.5	124.3	256	197.9	162.4
17	13.1	10.8	77	59.5	48.8	137	105.9	86.9	197	152.3	125.0	257	198.7	163.0
18	13.9	11.4	78	60.3	49.5	138	106.7	87.5	198	153.1	125.6	258	199.4	163.7
19	14.7	12.0	79	61.1	50.1	139	107.4	88.2	199	153.8	126.2	259	200.2	164.3
20	15.5	12.7	80	61.8	50.7	140	108.2	88.8	200	154.6	126.9	260	201.0	164.9
21	16.2	13.3	81	62.6	51.4	141	109.0	89.4	201	155.4	127.5	261	201.8	165.6
22	17.0	14.0	82	63.4	52.0	142	109.8	90.1	202	156.1	128.1	262	202.5	166.2
23	17.8	14.6	83	64.2	52.7	143	110.5	90.7	203	156.9	128.8	263	203.3	166.8
24	18.5	15.2	84	64.9	53.3	144	111.3	91.3	204	157.7	129.4	264	204.1	167.5
25	19.3	15.9	85	65.7	53.9	145	112.1	92.0	205	158.5	130.0	265	204.8	168.1
26	20.1	16.5	86	66.5	54.6	146	112.9	92.6	206	159.2	130.7	266	205.6	168.7
27	20.9	17.1	87	67.2	55.2	147	113.6	93.3	207	160.0	131.3	267	206.4	169.4
28	21.6	17.8	88	68.0	55.8	148	114.4	93.9	208	160.8	132.0	268	207.2	170.0
29	22.4	18.4	89	68.8	56.5	149	115.2	94.5	209	161.6	132.6	269	207.9	170.6
30	23.2	19.0	90	69.6	57.1	150	115.9	95.2	210	162.3	133.2	270	208.7	171.3
31	24.0	19.7	91	70.3	57.7	151	116.7	95.8	211	163.1	133.9	271	209.5	171.9
32	24.7	20.3	92	71.1	58.4	152	117.5	96.4	212	163.9	134.5	272	210.3	172.6
33	25.5	20.9	93	71.9	59.0	153	118.3	97.1	213	164 6	135.1	273	211.0	173.2
34	26.3	21.6	94	72.7	59.6	154	119.0	97.7	214	165.4	135.8	274	211.8	173.8
35	27.1	22.2	95	73.4	60.3	155	119.8	98.3	215	166.2	136.4	275	212.6	174.5
36	27.8	22.8	96	74.2	60.9	156	120.6	99.0	216	167 0	137 0	276	213.3	175.1
37	28.6	23.5	97	75.0	61.5	157	121.4	99.6	217	167.7	137.7	277	214.1	175.7
38	29.4	24.1	98	75.7	62.2	158	122.1	100.2	218	168.5	138.3	278	214.9	176.4
39	30.1	24.7	99	76.5	62.8	159	122.9	100.9	219	169.3	138.9	279	215.7	177.0
40	30.9	25.4	100	77.3	63.4	160	123.7	101.5	220	170.1	139.6	280	216.4	177.6
41	31.7	26.0	101	78.1	64.1	161	124.4	102.1	221	170.8	140.2	281	217.2	178.3
42	32.5	26.6	102	78.8	64.7	162	125.2	102.8	222	171.6	140.8	282	218.0	178.9
43	33.2	27.3	103	79.6	65.3	163	126.0	103.4	223	172.4	141.5	283	218.8	179.5
44	34.0	27.9	104	80.4	66.0	164	126.8	104.0	224	173.1	142.1	284	219.5	180.2
45	34.8	28.5	105	81.2	66.6	165	127.5	104.7	225	173.9	142.7	285	220.3	180.8
46	35.6	29.2	106	81.9	67.2	166	128.3	105.3	226	174.7	143.4	286	221.1	181.4
47	36.3	29.8	107	82.7	67.9	167	129.1	105.9	227	175.5	144.0	287	221.8	182.1
48	37.1	30.4	108	83.5	68.5	168	129.9	106.6	228	176.2	144.6	288	222.6	182.7
49	37.9	31.1	109	84.3	69.1	169	130.6	107.2	229	177.0	145.3	289	223.4	183.3
50	38.6	31.7	110	85.0	69.8	170	131.4	107.8	230	177.8	145.9	290	224.2	184.0
51	39.4	32.3	111	85.8	70.4	171	132.2	108.5	231	178.6	146.5	291	224.9	184.6
52	40.2	33.0	112	86.6	71.0	172	133.0	109.1	232	179.3	147.2	292	225.7	185.2
53	41.0	33.6	113	87.3	71.7	173	133.7	109.7	233	180.1	147.8	293	226.5	185.9
54	41.7	34.3	114	88.1	72.3	174	134.5	110.4	234	180.9	148.4	294	227.3	186.5
55	42.5	34.9	115	88.9	73.0	175	135.3	111.0	235	181.7	149.1	295	228.0	187.1
56	43.3	35.5	116	89.7	73.6	176	136.0	111.6	236	182.4	149.7	296	228.8	187.8
57	44.1	36.2	117	90.4	74.2	177	136.8	112.3	237	183.2	150.3	297	229.6	188.4
58	44.8	36.8	118	91.2	74.9	178	137.6	112.9	238	184.0	151.0	298	230.4	189.0
59	45.6	37.4	119	92.0	75.5	179	138.4	113.6	239	184.7	151.6	299	231.1	189.7
60	46.4	38.1	120	92.8	76.1	180	139.1	114.2	240	185.5	152.3	300	231.9	190.3
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.7	00.7	61	45.2	41.0	121	89.6	81.3	181	134.1	121.5	241	178.6	161.8
2	01.5	01.3	62	45.9	41.6	122	90.4	81.9	182	134.8	122.2	242	179.3	162.5
3	02.2	02.0	63	46.7	42.3	123	91.1	82.6	183	135.6	122.9	243	180.0	163.2
4	03.0	02.7	64	47.4	43.0	124	91.9	83.3	184	136.3	123.6	244	180.8	163.8
5	03.7	03.4	65	48.2	43.6	125	92.6	83.9	185	137.1	124.2	245	181.5	164.5
6	04.4	04.0	66	48.9	44.3	126	93.4	84.6	186	137.8	124.9	246	182.3	165.2
7	05.2	04.7	67	49.6	45.0	127	94.1	85.3	187	138.6	125.6	247	183.0	165.9
8	05.9	05.4	68	50.4	45.7	128	94.8	86.0	188	139.3	126.2	248	183.8	166.5
9	06.7	06.0	69	51.1	46.3	129	95.6	86.6	189	140.0	126.9	249	184.5	167.2
10	**07.4**	**06.7**	**70**	**51.9**	**47.0**	**130**	**96.3**	**87.3**	**190**	**140.8**	**127.6**	**250**	**185.2**	**167.9**
11	08.2	07.4	71	52.6	47.7	131	97.1	88.0	191	141.5	128.3	251	186.0	168.5
12	08.9	08.1	72	53.3	48.3	132	97.8	88.6	192	142.3	128.9	252	186.7	169.2
13	09.6	08.7	73	54.1	49.0	133	98.5	89.3	193	143.0	129.6	253	187.5	169.9
14	10.4	09.4	74	54.8	49.7	134	99.3	90.0	194	143.7	130.3	254	188.2	170.6
15	11.1	10.1	75	55.6	50.4	135	100.0	90.7	195	144.5	130.9	255	188.9	171.2
16	11.9	10.7	76	56.3	51.0	136	100.8	91.3	196	145.2	131.6	256	189.7	171.9
17	12.6	11.4	77	57.0	51.7	137	101.5	92.0	197	146.0	132.3	257	190.4	172.6
18	13.3	12.1	78	57.8	52.4	138	102.2	92.7	198	146.7	133.0	258	191.2	173.2
19	14.1	12.8	79	58.5	53.0	139	103.0	93.3	199	147.4	133.6	259	191.9	173.9
20	**14.8**	**13.4**	**80**	**59.3**	**53.7**	**140**	**103.7**	**94.0**	**200**	**148.2**	**134.3**	**260**	**192.6**	**174.6**
21	15.6	14.1	81	60.0	54.4	141	104.5	94.7	201	148.9	135.0	261	193.4	175.3
22	16.3	14.8	82	60.8	55.1	142	105.2	95.4	202	149.7	135.6	262	194.1	175.9
23	17.0	15.4	83	61.5	55.7	143	106.0	96.0	203	150.4	136.3	263	194.9	176.6
24	17.8	16.1	84	62.2	56.4	144	106.7	96.7	204	151.1	137.0	264	195.6	177.3
25	18.5	16.8	85	63.0	57.1	145	107.4	97.4	205	151.9	137.7	265	196.3	178.0
26	19.3	17.5	86	63.7	57.7	146	108.2	98.0	206	152.6	138.3	266	197.1	178.6
27	20.0	18.1	87	64.5	58.4	147	108.9	98.7	207	153.4	139.0	267	197.8	179.3
28	20.7	18.8	88	65.2	59.1	148	109.7	99.4	208	154.1	139.7	268	198.6	180.0
29	21.5	19.5	89	65.9	59.8	149	110.4	100.1	209	154.9	140.3	269	199.3	180.6
30	**22.2**	**20.1**	**90**	**66.7**	**60.4**	**150**	**111.1**	**100.7**	**210**	**155.6**	**141.0**	**270**	**200.1**	**181.3**
31	23.0	20.8	91	67.4	61.1	151	111.9	101.4	211	156.3	141.7	271	200.8	182.0
32	23.7	21.5	92	68.2	61.8	152	112.6	102.1	212	157.1	142.4	272	201.5	182.7
33	24.4	22.2	93	68.9	62.4	153	113.4	102.7	213	157.8	143.0	273	202.3	183.3
34	25.2	22.8	94	69.6	63.1	154	114.1	103.4	214	158.6	143.7	274	203.0	184.0
35	25.9	23.5	95	70.4	63.8	155	114.8	104.1	215	159.3	144.4	275	203.8	184.7
36	26.7	24.2	96	71.1	64.5	156	115.6	104.8	216	160.0	145.0	276	204.5	185.3
37	27.4	24.8	97	71.9	65.1	157	116.3	105.4	217	160.8	145.7	277	205.2	186.0
38	28.2	25.5	98	72.6	65.8	158	117.1	106.1	218	161.5	146.4	278	206.0	186.7
39	28.9	26.2	99	73.3	66.5	159	117.8	106.8	219	162.3	147.1	279	206.7	187.4
40	**29.6**	**26.9**	**100**	**74.1**	**67.2**	**160**	**118.5**	**107.4**	**220**	**163.0**	**147.7**	**280**	**207.5**	**188.0**
41	30.4	27.5	101	74.8	67.8	161	119.3	108.1	221	163.7	148.4	281	208.2	188.7
42	31.1	28.2	102	75.6	68.5	162	120.0	108.8	222	164.5	149.1	282	208.9	189.4
43	31.9	28.9	103	76.3	69.2	163	120.8	109.5	223	165.2	149.7	283	209.7	190.0
44	32.6	29.5	104	77.1	69.8	164	121.5	110.1	224	166.0	150.4	284	210.4	190.7
45	33.3	30.2	105	77.8	70.5	165	122.3	110.8	225	166.7	151.1	285	211.2	191.4
46	34.1	30.9	106	78.5	71.2	166	123.0	111.5	226	167.4	151.8	286	211.9	192.1
47	34.8	31.6	107	79.3	71.8	167	123.7	112.1	227	168.2	152.4	287	212.6	192.7
48	35.6	32.2	108	80.0	72.5	168	124.5	112.8	228	168.9	153.1	288	213.4	193.4
49	36.3	32.9	109	80.8	73.2	169	125.2	113.5	229	169.7	153.8	289	214.1	194.1
50	**37.0**	**33.6**	**110**	**81.5**	**73.9**	**170**	**126.0**	**114.2**	**230**	**170.4**	**154.5**	**290**	**214.9**	**194.7**
51	37.8	34.2	111	82.2	74.5	171	126.7	114.8	231	171.2	155.1	291	215.6	195.4
52	38.5	34.9	112	83.0	75.2	172	127.4	115.5	232	171.9	155.8	292	216.4	196.1
53	39.3	35.6	113	83.7	75.9	173	128.2	116.2	233	172.6	156.5	293	217.1	196.8
54	40.0	36.3	114	84.5	76.5	174	128.9	116.8	234	173.4	157.1	294	217.8	197.4
55	40.7	36.9	115	85.2	77.2	175	129.7	117.5	235	174.1	157.8	295	218.6	198.1
56	41.5	37.6	116	85.9	77.9	176	130.4	118.2	236	174.9	158.5	296	219.3	198.8
57	42.2	38.3	117	86.7	78.6	177	131.1	118.9	237	175.6	159.1	297	220.1	199.4
58	43.0	38.9	118	87.4	79.2	178	131.9	119.5	238	176.3	159.8	298	220.8	200.1
59	*43.7*	39.6	119	88.2	79.9	179	132.6	120.2	239	177.1	160.5	299	221.5	200.8
60	*44.5*	*40.3*	120	88.9	80.6	180	133.4	120.9	240	177.8	161 2	300	222.3	201.5
Dist.	*Dep.*	*Lat.*	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.7	00.7	61	43.1	43.1	121	85.6	85.6	181	128.0	128.0	241	170.4	170.4
2	01.4	01.4	62	43.8	43.8	122	86.3	86.3	182	128.7	128.7	242	171.1	171.1
3	02.1	02.1	63	44.5	44.5	123	87.0	87.0	183	129.4	129.4	243	171.8	171.8
4	02.8	02.8	64	45.3	45.3	124	87.7	87.7	184	130.1	130.1	244	172.5	172.5
5	03.5	03.5	65	46.0	46.0	125	88.4	88.4	185	130.8	130.8	245	173.2	173.2
6	04.2	04.2	66	46.7	46.7	126	89.1	89.1	186	131.5	131.5	246	173.9	173.9
7	04.9	04.9	67	47.4	47.4	127	89.8	89.8	187	132.2	132.2	247	174.7	174.7
8	05.7	05.7	68	48.1	48.1	128	90.5	90.5	188	132.9	132.9	248	175.4	175.4
9	06.4	06.4	69	48.8	48.8	129	91.2	91.2	189	133.6	133.6	249	176.1	176.1
10	**07.1**	**07.1**	**70**	**49.5**	**49.5**	**130**	**91.9**	**91.9**	**190**	**134.3**	**134.3**	**250**	**176.8**	**176.8**
11	07.8	07.8	71	50.2	50.2	131	92.6	92.6	191	135.1	135.1	251	177.5	177.5
12	08.5	08.5	72	50.9	50.9	132	93.3	93.3	192	135.8	135.8	252	178.2	178.2
13	09.2	09.2	73	51.6	51.6	133	94.0	94.0	193	136.5	136.5	253	178.9	178.9
14	09.9	09.9	74	52.3	52.3	134	94.8	94.8	194	137.2	137.2	254	179.6	179.6
15	10.6	10.6	75	53.0	53.0	135	95.5	95.5	195	137.9	137.9	255	180.3	180.3
16	11.3	11.3	76	53.7	53.7	136	96.2	96.2	196	138.6	138.6	256	181.0	181.0
17	12.0	12.0	77	54.4	54.4	137	96.9	96.9	197	139.3	139.3	257	181.7	181.7
18	12.7	12.7	78	55.2	55.2	138	97.6	97.6	198	140.0	140.0	258	182.4	182.4
19	13.4	13.4	79	55.9	55.9	139	98.3	98.3	199	140.7	140.7	259	183.1	183.1
20	**14.1**	**14.1**	**80**	**56.6**	**56.6**	**140**	**99.0**	**99.0**	**200**	**141.4**	**141.4**	**260**	**183.8**	**183.8**
21	14.8	14.8	81	57.3	57.3	141	99.7	99.7	201	142.1	142.1	261	184.6	184.6
22	15.6	15.6	82	58.0	58.0	142	100.4	100.4	202	142.8	142.8	262	185.3	185.3
23	16.3	16.3	83	58.7	58.7	143	101.1	101.1	203	143.5	143.5	263	186.0	186.0
24	17.0	17.0	84	59.4	59.4	144	101.8	101.8	204	144.2	144.2	264	186.7	186.7
25	17.7	17.7	85	60.1	60.1	145	102.5	102.5	205	145.0	145.0	265	187.4	187.4
26	18.4	18.4	86	60.8	60.8	146	103.2	103.2	206	145.7	145.7	266	188.1	188.1
27	19.1	19.1	87	61.5	61.5	147	103.9	103.9	207	146.4	146.4	267	188.8	188.8
28	19.8	19.8	88	62.2	62.2	148	104.7	104.7	208	147.1	147.1	268	189.5	189.5
29	20.5	20.5	89	62.9	62.9	149	105.4	105.4	209	147.8	147.8	269	190.2	190.2
30	**21.2**	**21.2**	**90**	**63.6**	**63.6**	**150**	**106.1**	**106.1**	**210**	**148.5**	**148.5**	**270**	**190.9**	**190.9**
31	21.9	21.9	91	64.3	64.3	151	106.8	106.8	211	149.2	149.2	271	191.6	191.6
32	22.6	22.6	92	65.1	65.1	152	107.5	107.5	212	149.9	149.9	272	192.3	192.3
33	23.3	23.3	93	65.8	65.8	153	108.2	108.2	213	150.6	150.6	273	193.0	193.0
34	24.0	24.0	94	66.5	66.5	154	108.9	108.9	214	151.3	151.3	274	193.7	193.7
35	24.7	24.7	95	67.2	67.2	155	109.6	109.6	215	152.0	152.0	275	194.5	194.5
36	25.5	25.5	96	67.9	67.9	156	110.3	110.3	216	152.7	152.7	276	195.2	195.2
37	26.2	26.2	97	68.6	68.6	157	111.0	111.0	217	153.4	153.4	277	195.9	195.9
38	26.9	26.9	98	69.3	69.3	158	111.7	111.7	218	154.1	154.1	278	196.6	196.6
39	27.6	27.6	99	70.0	70.0	159	112.4	112.4	219	154.9	154.9	279	197.3	197.3
40	**28.3**	**28.3**	**100**	**70.7**	**70.7**	**160**	**113.1**	**113.1**	**220**	**155.6**	**155.6**	**280**	**198.0**	**198.0**
41	29.0	29.0	101	71.4	71.4	161	113.8	113.8	221	156.3	156.3	281	198.7	198.7
42	29.7	29.7	102	72.1	72.1	162	114.5	114.5	222	157.0	157.0	282	199.4	199.4
43	30.4	30.4	103	72.8	72.8	163	115.3	115.3	223	157.7	157.7	283	200.1	200.1
44	31.1	31.1	104	73.5	73.5	164	116.0	116.0	224	158.4	158.4	284	200.8	200.8
45	31.8	31.8	105	74.2	74.2	165	116.7	116.7	225	159.1	159.1	285	201.5	201.5
46	32.5	32.5	106	75.0	75.0	166	117.4	117.4	226	159.8	159.8	286	202.2	202.2
47	33.2	33.2	107	75.7	75.7	167	118.1	118.1	227	160.5	160.5	287	202.9	202.9
48	33.9	33.9	108	76.4	76.4	168	118.8	118.8	228	161.2	161.2	288	203.6	203.6
49	34.6	34.6	109	77.1	77.1	169	119.5	119.5	229	161.9	161.9	289	204.3	204.3
50	**35.4**	**35.4**	**110**	**77.8**	**77.8**	**170**	**120.2**	**120.2**	**230**	**162.6**	**162.6**	**290**	**205.1**	**205.1**
51	36.1	36.1	111	78.5	78.5	171	120.9	120.9	231	163.3	163.3	291	205.8	205.8
52	36.8	36.8	112	79.2	79.2	172	121.6	121.6	232	164.0	164.0	292	206.5	206.5
53	37.5	37.5	113	79.9	79.9	173	122.3	122.3	233	164.8	164.8	293	207.2	207.2
54	38.2	38.2	114	80.6	80.6	174	123.0	123.0	234	165.5	165.5	294	207.9	207.9
55	38.9	38.9	115	81.3	81.3	175	123.7	123.7	235	166.2	166.2	295	208.6	208.6
56	39.6	39.6	116	82.0	82.0	176	124.4	124.4	236	166.9	166.9	296	209.3	209.3
57	40.3	40.3	117	82.7	82.7	177	125.2	125.2	237	167.6	167.6	297	210.0	210.0
58	41.0	41.0	118	83.4	83.4	178	125.9	125.9	238	168.3	168.3	298	210.7	210.7
59	41.7	41.7	119	84.1	84.1	179	126.6	126.6	239	169.0	169.0	299	211.4	211.4
60	42.4	42.4	120	84.8	84.8	180	127.3	127.3	240	169.7	169.7	300	212.1	212.1
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Difference of Latitude and Departure for 4 Points.

TABLE VI.

TRAVERSE TABLE (DEGREES).

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.0	61	61.0	01.1	121	121.0	02.1	181	181.0	03.2	241	241.0	04.2
2	02.0	00.0	62	62.0	01.1	122	122.0	02.1	182	182.0	03.2	242	242.0	04.2
3	03.0	00.1	63	63.0	01.1	123	123.0	02.1	183	183.0	03.2	243	243.0	04.2
4	04.0	00.1	64	64.0	01.1	124	124.0	02.2	184	184.0	03.2	244	244.0	04.3
5	05.0	00.1	65	65.0	01.1	125	125.0	02.2	185	185.0	03.2	245	245.0	04.3
6	06.0	00.1	66	66.0	01.2	126	126.0	02.2	186	186.0	03.2	246	246.0	04.3
7	07.0	00.1	67	67.0	01.2	127	127.0	02.2	187	187.0	03.3	247	247.0	04.3
8	08.0	00.1	68	68.0	01.2	128	128.0	02.2	188	188.0	03.3	248	248.0	04.3
9	09.0	00.2	69	69.0	01.2	129	129.0	02.3	189	189.0	03.3	249	249.0	04.3
10	10.0	00.2	70	70.0	01.2	130	130.0	02.3	190	190.0	03.3	250	250.0	04.4
11	11.0	00.2	71	71.0	01.2	131	131.0	02.3	191	191.0	03.3	251	251.0	04.4
12	12.0	00.2	72	72.0	01.3	132	132.0	02.3	192	192.0	03.4	252	252.0	04.4
13	13.0	00.2	73	73.0	01.3	133	133.0	02.3	193	193.0	03.4	253	253.0	04.4
14	14.0	00.2	74	74.0	01.3	134	134.0	02.3	194	194.0	03.4	254	254.0	04.4
15	15.0	00.3	75	75.0	01.3	135	135.0	02.4	195	195.0	03.4	255	255.0	04.5
16	16.0	00.3	76	76.0	01.3	136	136.0	02.4	196	196.0	03.4	256	256.0	04.5
17	17.0	00.3	77	77.0	01.3	137	137.0	02.4	197	197.0	03.4	257	257.0	04.5
18	18.0	00.3	78	78.0	01.4	138	138.0	02.4	198	198.0	03.5	258	258.0	04.5
19	19.0	00.3	79	79.0	01.4	139	139.0	02.4	199	199.0	03.5	259	259.0	04.5
20	20.0	00.3	80	80.0	01.4	140	140.0	02.4	200	200.0	03.5	260	260.0	04.5
21	21.0	00.4	81	81.0	01.4	141	141.0	02.5	201	201.0	03.5	261	261.0	04.6
22	22.0	00.4	82	82.0	01.4	142	142.0	02.5	202	202.0	03.5	262	262.0	04.6
23	23.0	00.4	83	83.0	01.4	143	143.0	02.5	203	203.0	03.5	263	263.0	04.6
24	24.0	00.4	84	84.0	01.5	144	144.0	02.5	204	204.0	03.6	264	264.0	04.6
25	25.0	00.4	85	85.0	01.5	145	145.0	02.5	205	205.0	03.6	265	265.0	04.6
26	26.0	00.5	86	86.0	01.5	146	146.0	02.5	206	206.0	03.6	266	266.0	04.6
27	27.0	00.5	87	87.0	01.5	147	147.0	02.6	207	207.0	03.6	267	267.0	04.7
28	28.0	00.5	88	88.0	01.5	148	148.0	02.6	208	208.0	03.6	268	268.0	04.7
29	29.0	00.5	89	89.0	01.6	149	149.0	02.6	209	209.0	03.6	269	269.0	04.7
30	30.0	00.5	90	90.0	01.6	150	150.0	02.6	210	210.0	03.7	270	270.0	04.7
31	31.0	00.5	91	91.0	01.6	151	151.0	02.6	211	211.0	03.7	271	271.0	04.7
32	32.0	00.6	92	92.0	01.6	152	152.0	02.7	212	212.0	03.7	272	272.0	04.7
33	33.0	00.6	93	93.0	01.6	153	153.0	02.7	213	213.0	03.7	273	273.0	04.8
34	34.0	00.6	94	94.0	01.6	154	154.0	02.7	214	214.0	03.7	274	274.0	04.8
35	35.0	00.6	95	95.0	01.7	155	155.0	02.7	215	215.0	03.8	275	275.0	04.8
36	36.0	00.6	96	96.0	01.7	156	156.0	02.7	216	216.0	03.8	276	276.0	04.8
37	37.0	00.6	97	97.0	01.7	157	157.0	02.7	217	217.0	03.8	277	277.0	04.8
38	38.0	00.7	98	98.0	01.7	158	158.0	02.8	218	218.0	03.8	278	278.0	04.9
39	39.0	00.7	99	99.0	01.7	159	159.0	02.8	219	219.0	03.8	279	279.0	04.9
40	40.0	00.7	100	100.0	01.7	160	160.0	02.8	220	220.0	03.8	280	280.0	04.9
41	41.0	00.7	101	101.0	01.8	161	161.0	02.8	221	221.0	03.9	281	281.0	04.9
42	42.0	00.7	102	102.0	01.8	162	162.0	02.8	222	222.0	03.9	282	282.0	04.9
43	43.0	00.8	103	103.0	01.8	163	163.0	02.8	223	223.0	03.9	283	283.0	04.9
44	44.0	00.8	104	104.0	01.8	164	164.0	02.9	224	224.0	03.9	284	284.0	05.0
45	45.0	00.8	105	105.0	01.8	165	165.0	02.9	225	225.0	03.9	285	285.0	05.0
46	46.0	00.8	106	106.0	01.8	166	166.0	02.9	226	226.0	03.9	286	286.0	05.0
47	47.0	00.8	107	107.0	01.9	167	167.0	02.9	227	227.0	04.0	287	287.0	05.0
48	48.0	00.8	108	108.0	01.9	168	168.0	02.9	228	228.0	04.0	288	288.0	05.0
49	49.0	00.9	109	109.0	01.9	169	169.0	02.9	229	229.0	04.0	289	289.0	05.0
50	50.0	00.9	110	110.0	01.9	170	170.0	03.0	230	230.0	04.0	290	290.0	05.1
51	51.0	00.9	111	111.0	01.9	171	171.0	03.0	231	231.0	04.0	291	291.0	05.1
52	52.0	00.9	112	112.0	02.0	172	172.0	03.0	232	232.0	04.0	292	292.0	05.1
53	53.0	00.9	113	113.0	02.0	173	173.0	03.0	233	233.0	04.1	293	293.0	05.1
54	54.0	00.9	114	114.0	02.0	174	174.0	03.0	234	234.0	04.1	294	294.0	05.1
55	55.0	01.0	115	115.0	02.0	175	175.0	03.1	235	235.0	04.1	295	295.0	05.1
56	56.0	01.0	116	116.0	02.0	176	176.0	03.1	236	236.0	04.1	296	296.0	05.2
57	57.0	01.0	117	117.0	02.0	177	177.0	03.1	237	237.0	04.1	297	297.0	05.2
58	58.0	01.0	118	118.0	02.1	178	178.0	03.1	238	238.0	04.2	298	298.0	05.2
59	59.0	01.0	119	119.0	02.1	179	179.0	03.1	239	239.0	04.2	299	299.0	05.2
60	60.0	01.0	120	120.0	02.1	180	180.0	03.1	240	240.0	04.2	300	300.0	05.2
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.0	61	61.0	02.1	121	120.9	04.2	181	180.9	06.3	241	240.9	08.4
2	02.0	00.1	62	62.0	02.2	122	121.9	04.3	182	181.9	06.4	242	241.9	08.4
3	03.0	00.1	63	63.0	02.2	123	122.9	04.3	183	182.9	06.4	243	242.9	08.5
4	04.0	00.1	64	64.0	02.2	124	123.9	04.3	184	183.9	06.4	244	243.9	08.5
5	05.0	00.2	65	65.0	02.3	125	124.9	04.4	185	184.9	06.5	245	244.9	08.6
6	06.0	00.2	66	66.0	02.3	126	125.9	04.4	186	185.9	06.5	246	245.9	08.6
7	07.0	00.2	67	67.0	02.3	127	126.9	04.4	187	186.9	06.5	247	246.8	08.6
8	08.0	00.3	68	68.0	02.4	128	127.9	04.5	188	187.9	06.6	248	247.8	08.7
9	09.0	00.3	69	69.0	02.4	129	128.9	04.5	189	188.9	06.6	249	248.8	08.7
10	10.0	00.3	70	70.0	02.4	130	129.9	04.5	190	189.9	06.6	250	249.8	08.7
11	11.0	00.4	71	71.0	02.5	131	130.9	04.6	191	190.9	06.7	251	250.8	08.8
12	12.0	00.4	72	72.0	02.5	132	131.9	04.6	192	191.9	06.7	252	251.8	08.8
13	13.0	00.5	73	73.0	02.5	133	132.9	04.6	193	192.9	06.7	253	252.8	08.8
14	14.0	00.5	74	74.0	02.6	134	133.9	04.7	194	193.9	06.8	254	253.8	08.9
15	15.0	00.5	75	75.0	02.6	135	134.9	04.7	195	194.9	06.8	255	254.8	08.9
16	16.0	00.6	76	76.0	02.7	136	135.9	04.7	196	195.9	06.8	256	255.8	08.9
17	17.0	00.6	77	77.0	02.7	137	136.9	04.8	197	196.9	06.9	257	256.8	09.0
18	18.0	00.6	78	78.0	02.7	138	137.9	04.8	198	197.9	06.9	258	257.8	09.0
19	19.0	00.7	79	79.0	02.8	139	138.9	04.9	199	198.9	06.9	259	258.8	09.0
20	20.0	00.7	80	80.0	02.8	140	139.9	04.9	200	199.9	07.0	260	259.8	09.1
21	21.0	00.7	81	81.0	02.8	141	140.9	04.9	201	200.9	07.0	261	260.8	09.1
22	22.0	00.8	82	82.0	02.9	142	141.9	05.0	202	201.9	07.0	262	261.8	09.1
23	23.0	00.8	83	82.9	02.9	143	142.9	05.0	203	202.9	07.1	263	262.8	09.2
24	24.0	00.8	84	83.9	02.9	144	143.9	05.0	204	203.9	07.1	264	263.8	09.2
25	25.0	00.9	85	84.9	03.0	145	144.9	05.1	205	204.9	07.2	265	264.8	09.2
26	26.0	00.9	86	85.9	03.0	146	145.9	05.1	206	205.9	07.2	266	265.8	09.3
27	27.0	00.9	87	86.9	03.0	147	146.9	05.1	207	206.9	07.2	267	266.8	09.3
28	28.0	01.0	88	87.9	03.1	148	147.9	05.2	208	207.9	07.3	268	267.8	09.4
29	29.0	01.0	89	88.9	03.1	149	148.9	05.2	209	208.9	07.3	269	268.8	09.4
30	30.0	01.0	90	89.9	03.1	150	149.9	05.2	210	209.9	07.3	270	269.8	09.4
31	31.0	01.1	91	90.9	03.2	151	150.9	05.3	211	210.9	07.4	271	270.8	09.5
32	32.0	01.1	92	91.9	03.2	152	151.9	05.3	212	211.9	07.4	272	271.8	09.5
33	33.0	01.2	93	92.9	03.2	153	152.9	05.3	213	212.9	07.4	273	272.8	09.5
34	34.0	01.2	94	93.9	03.3	154	153.9	05.4	214	213.9	07.5	274	273.8	09.6
35	35.0	01.2	95	94.9	03.3	155	154.9	05.4	215	214.9	07.5	275	274.8	09.6
36	36.0	01.3	96	95.9	03.4	156	155.9	05.4	216	215.9	07.5	276	275.8	09.6
37	37.0	01.3	97	96.9	03.4	157	156.9	05.5	217	216.9	07.6	277	276.8	09.7
38	38.0	01.3	98	97.9	03.4	158	157.9	05.5	218	217.9	07.6	278	277.8	09.7
39	39.0	01.4	99	98.9	03.5	159	158.9	05.5	219	218.9	07.6	279	278.8	09.7
40	40.0	01.4	100	99.9	03.5	160	159.9	05.6	220	219.9	07.7	280	279.8	09.8
41	41.0	01.4	101	100.9	03.5	161	160.9	05.6	221	220.9	07.7	281	280.8	09.8
42	42.0	01.5	102	101.9	03.6	162	161.9	05.7	222	221.9	07.7	282	281.8	09.8
43	43.0	01.5	103	102.9	03.6	163	162.9	05.7	223	222.9	07.8	283	282.8	09.9
44	44.0	01.5	104	103.9	03.6	164	163.9	05.7	224	223.9	07.8	284	283.8	09.9
45	45.0	01.6	105	104.9	03.7	165	164.9	05.8	225	224.9	07.9	285	284.8	09.9
46	46.0	01.6	106	105.9	03.7	166	165.9	05.8	226	225.9	07.9	286	285.8	10.0
47	47.0	01.6	107	106.9	03.7	167	166.9	05.8	227	226.9	07.9	287	286.8	10.0
48	48.0	01.7	108	107.9	03.8	168	167.9	05.9	228	227.9	08.0	288	287.8	10.1
49	49.0	01.7	109	108.9	03.8	169	168.9	05.9	229	228.9	08.0	289	288.8	10.1
50	50.0	01.7	110	109.9	03.8	170	169.9	05.9	230	229.9	08.0	290	289.8	10.1
51	51.0	01.8	111	110.9	03.9	171	170.9	06.0	231	230.9	08.1	291	290.8	10.2
52	52.0	01.8	112	111.9	03.9	172	171.9	06.0	232	231.9	08.1	292	291.8	10.2
53	53.0	01.8	113	112.9	03.9	173	172.9	06.0	233	232.9	08.1	293	292.8	10.2
54	54.0	01.9	114	113.9	04.0	174	173.9	06.1	234	233.9	08.2	294	293.8	10.3
55	55.0	01.9	115	114.9	04.0	175	174.9	06.1	235	234.9	08.2	295	294.8	10.3
56	56.0	02.0	116	115.9	04.0	176	175.9	06.1	236	235.9	08.2	296	295.8	10.3
57	57.0	02.0	117	116.9	04.1	177	176.9	06.2	237	236.9	08.3	297	296.8	10.4
58	58.0	02.0	118	117.9	04.1	178	177.9	06.2	238	237.9	08.3	298	297.8	10.4
59	59.0	02.1	119	118.9	04.2	179	178.9	06.2	239	238.9	08.3	299	298.8	10.4
60	60.0	02.1	120	119.9	04.2	180	179.9	06.3	240	239.9	08.4	300	299.8	10.5
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.1	61	60.9	03.2	121	120.8	06.3	181	180.8	09.5	241	240.7	12.6
2	02.0	00.1	62	61.9	03.2	122	121.8	06.4	182	181.8	09.5	242	241.7	12.7
3	03.0	00.2	63	62.9	03.3	123	122.8	06.4	183	182.7	09.6	243	242.7	12.7
4	04.0	00.2	64	63.9	03.3	124	123.8	06.5	184	183.7	09.6	244	243.7	12.8
5	05.0	00.3	65	64.9	03.4	125	124.8	06.5	185	184.7	09.7	245	244.7	12.8
6	06.0	00.3	66	65.9	03.5	126	125.8	06.6	186	185.7	09.7	246	245.7	12.9
7	07.0	00.4	67	66.9	03.5	127	126.8	06.6	187	186.7	09.8	247	246.7	12.9
8	08.0	00.4	68	67.9	03.6	128	127.8	06.7	188	187.7	09.8	248	247.7	13.0
9	09.0	00.5	69	68.9	03.6	129	128.8	06.8	189	188.7	09.9	249	248.7	13.0
10	**10.0**	**00.5**	**70**	**69.9**	**03.7**	**130**	**129.8**	**06.8**	**190**	**189.7**	**09.9**	**250**	**249.7**	**13.1**
11	11.0	00.6	71	70.9	03.7	131	130.8	06.9	191	190.7	10.0	251	250.7	13.1
12	12.0	00.6	72	71.9	03.8	132	131.8	06.9	192	191.7	10.0	252	251.7	13.2
13	13.0	00.7	73	72.9	03.8	133	132.8	07.0	193	192.7	10.1	253	252.7	13.2
14	14.0	00.7	74	73.9	03.9	134	133.8	07.0	194	193.7	10.2	254	253.7	13.3
15	15.0	00.8	75	74.9	03.9	135	134.8	07.1	195	194.7	10.2	255	254.7	13.3
16	16.0	00.8	76	75.9	04.0	136	135.8	07.1	196	195.7	10.3	256	255.6	13.4
17	17.0	00.9	77	76.9	04.0	137	136.8	07.2	197	196.7	10.3	257	256.6	13.5
18	18.0	00.9	78	77.9	04.1	138	137.8	07.2	198	197.7	10.4	258	257.6	13.5
19	19.0	01.0	79	78.9	04.1	139	138.8	07.3	199	198.7	10.4	259	258.6	13.6
20	**20.0**	**01.0**	**80**	**79.9**	**04.2**	**140**	**139.8**	**07.3**	**200**	**199.7**	**10.5**	**260**	**259.6**	**13.6**
21	21.0	01.1	81	80.9	04.2	141	140.8	07.4	201	200.7	10.5	261	260.6	13.7
22	22.0	01.2	82	81.9	04.3	142	141.8	07.4	202	201.7	10.6	262	261.6	13.7
23	23.0	01.2	83	82.9	04.3	143	142.8	07.5	203	202.7	10.6	263	262.6	13.8
24	24.0	01.3	84	83.9	04.4	144	143.8	07.5	204	203.7	10.7	264	263.6	13.8
25	25.0	01.3	85	84.9	04.4	145	144.8	07.6	205	204.7	10.7	265	264.6	13.9
26	26.0	01.4	86	85.9	04.5	146	145.8	07.6	206	205.7	10.8	266	265.6	13.9
27	27.0	01.4	87	86.9	04.6	147	146.8	07.7	207	206.7	10.8	267	266.6	14.0
28	28.0	01.5	88	87.9	04.6	148	147.8	07.7	208	207.7	10.9	268	267.6	14.0
29	29.0	01.5	89	88.9	04.7	149	148.8	07.8	209	208.7	10.9	269	268.6	14.1
30	**30.0**	**01.6**	**90**	**89.9**	**04.7**	**150**	**149.8**	**07.9**	**210**	**209.7**	**11.0**	**270**	**269.6**	**14.1**
31	31.0	01.6	91	90.9	04.8	151	150.8	07.9	211	210.7	11.0	271	270.6	14.2
32	32.0	01.7	92	91.9	04.8	152	151.8	08.0	212	211.7	11.1	272	271.6	14.2
33	33.0	01.7	93	92.9	04.9	153	152.8	08.0	213	212.7	11.1	273	272.6	14.3
34	34.0	01.8	94	93.9	04.9	154	153.8	08.1	214	213.7	11.2	274	273.6	14.3
35	35.0	01.8	95	94.9	05.0	155	154.8	08.1	215	214.7	11.3	275	274.6	14.4
36	36.0	01.9	96	95.9	05.0	156	155.8	08.2	216	215.7	11.3	276	275.6	14.4
37	36.9	01.9	97	96.9	05.1	157	156.8	08.2	217	216.7	11.4	277	276.6	14.5
38	37.9	02.0	98	97.9	05.1	158	157.8	08.3	218	217.7	11.4	278	277.6	14.5
39	38.9	02.0	99	98.9	05.2	159	158.8	08.3	219	218.7	11.5	279	278.6	14.6
40	**39.9**	**02.1**	**100**	**99.9**	**05.2**	**160**	**159.8**	**08.4**	**220**	**219.7**	**11.5**	**280**	**279.6**	**14.7**
41	40.9	02.1	101	100.9	05.3	161	160.8	08.4	221	220.7	11.6	281	280.6	14.7
42	41.9	02.2	102	101.9	05.3	162	161.8	08.5	222	221.7	11.6	282	281.6	14.8
43	42.9	02.3	103	102.9	05.4	163	162.8	08.5	223	222.7	11.7	283	282.6	14.8
44	43.9	02.3	104	103.9	05.4	164	163.8	08.6	224	223.7	11.7	284	283.6	14.9
45	44.9	02.4	105	104.9	05.5	165	164.8	08.6	225	224.7	11.8	285	284.6	14.9
46	45.9	02.4	106	105.9	05.5	166	165.8	08.7	226	225.7	11.8	286	285.6	15.0
47	46.9	02.5	107	106.9	05.6	167	166.8	08.7	227	226.7	11.9	287	286.6	15.0
48	47.9	02.5	108	107.9	05.7	168	167.8	08.8	228	227.7	11.9	288	287.6	15.1
49	48.9	02.6	109	108.9	05.7	169	168.8	08.8	229	228.7	12.0	289	288.6	15.1
50	**49.9**	**02.6**	**110**	**109.8**	**05.8**	**170**	**169.8**	**08.9**	**230**	**229.7**	**12.0**	**290**	**289.6**	**15.2**
51	50.9	02.7	111	110.8	05.8	171	170.8	08.9	231	230.7	12.1	291	290.6	15.2
52	51.9	02.7	112	111.8	05.9	172	171.8	09.0	232	231.7	12.1	292	291.6	15.3
53	52.9	02.8	113	112.8	05.9	173	172.8	09.1	233	232.7	12.2	293	292.6	15.3
54	53.9	02.8	114	113.8	06.0	174	173.8	09.1	234	233.7	12.2	294	293.6	15.4
55	54.9	02.9	115	114.8	06.0	175	174.8	09.2	235	234.7	12.3	295	294.6	15.4
56	55.9	02.9	116	115.8	06.1	176	175.8	09.2	236	235.7	12.4	296	295.6	15.5
57	56.9	03.0	117	116.8	06.1	177	176.8	09.3	237	236.7	12.4	297	296.6	15.5
58	57.9	03.0	118	117.8	06.2	178	177.8	09.3	238	237.7	12.5	298	297.6	15.6
59	58.9	03.1	119	118.8	06.2	179	178.8	09.4	239	238.7	12.5	299	298.6	15.6
60	59.9	03.1	120	119.8	06.3	180	179.8	09.4	240	239.7	12.6	300	299.6	15.7
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.1	61	60.9	04.3	121	120.7	08.4	181	180.6	12.6	241	240.4	16.8
2	02.0	00.1	62	61.8	04.3	122	121.7	08.5	182	181.6	12.7	242	241.4	16.9
3	03.0	00.2	63	62.8	04.4	123	122.7	08.6	183	182.6	12.8	243	242.4	17.0
4	04.0	00 3	64	63.8	04.5	124	123.7	08.6	184	183.6	12.8	244	243.4	17.0
5	05.0	00.3	65	64 8	04.5	125	124.7	08.7	185	184.5	12.9	245	244.4	17.1
6	06.0	00.4	66	65.8	04.6	126	125.7	08.8	186	185.5	13.0	246	245.4	17.2
7	07.0	00.5	67	66.8	04.7	127	126.7	08.9	187	186.5	13.0	247	246.4	17.2
8	08.0	00.6	68	67.8	04.7	128	127.7	08.9	188	187.5	13.1	248	247.4	17.3
9	09.0	00.6	69	68.8	04.8	129	128.7	09.0	189	188.5	13.2	249	248.4	17.4
10	**10.0**	**00.7**	**70**	**69.8**	**04.9**	**130**	**129.7**	**09.1**	**190**	**189.5**	**13.3**	**250**	**249.4**	**17.4**
11	11.0	00.8	71	70.8	05.0	131	130.7	09.1	191	190.5	13.3	251	250.4	17.5
12	12.0	00.8	72	71.8	05.0	132	131.7	09.2	192	191.5	13.4	252	251.4	17.6
13	13.0	00.9	73	72.8	05.1	133	132.7	09.3	193	192.5	13.5	253	252.4	17.6
14	14.0	01.0	74	73.8	05.2	134	133.7	09.3	194	193.5	13.5	254	253.4	17.7
15	15.0	01.0	75	74.8	05.2	135	134.7	09.4	195	194.5	13.6	255	254.4	17.8
16	16.0	01.1	76	75.8	05.3	136	135.7	09.5	196	195.5	13.7	256	255.4	17.9
17	17.0	01.2	77	76.8	05.4	137	136·7	09.6	197	196.5	13.7	257	256.4	17.9
18	18.0	01.3	78	77.8	05.4	138	137.7	09.6	198	197.5	13.8	258	257.4	18.0
19	19.0	01.3	79	78.8	05.5	139	138.7	09.7	199	198.5	13.9	259	258.4	18.1
20	**20.0**	**01.4**	**80**	**79.8**	**05.6**	**140**	**139.7**	**09.8**	**200**	**199.5**	**14.0**	**260**	**259.4**	**18.1**
21	20.9	01.5	81	80.8	05.7	141	140.7	09.8	201	200.5	14.0	261	260.4	18.2
22	21.9	01.5	82	81.8	05.7	142	141.7	09.9	202	201.5	14.1	262	261.4	18.3
23	22.9	01.6	83	82.8	05.8	143	142.7	10.0	203	202.5	14.2	263	262.4	18.3
24	23.9	01.7	84	83.8	05.9	144	143.6	10.0	204	203.5	14.2	264	263.4	18.4
25	24.9	01.7	85	84.8	05.9	145	144.6	10.1	205	204.5	14.3	265	264.4	18.5
26	25.9	01.8	86	85.8	06.0	146	145.6	10.2	206	205.5	14.4	266	265.4	18.6
27	26.9	01.9	87	86.8	06.1	147	146.6	10.3	207	206.5	14.4	267	266.3	18.6
28	27.9	02.0	88	87.8	06.1	148	147.6	10.3	208	207.5	14.5	268	267.3	18.7
29	28.9	02.0	89	88.8	06.2	149	148.6	10.4	209	208.5	14.6	269	268.3	18.8
30	**29.9**	**02.1**	**90**	**89.8**	**06.3**	**150**	**149.6**	**10.5**	**210**	**209.5**	**14.6**	**270**	**269.3**	**18.8**
31	30.9	02.2	91	90.8	06.3	151	150.6	10.5	211	210.5	14.7	271	270.3	18.9
32	31.9	02.2	92	91.8	06.4	152	151.6	10.6	212	211.5	14.8	272	271.3	19.0
33	32.9	02.3	93	92.8	06.5	153	152.6	10.7	213	212.5	14.9	273	272.3	19.0
34	33.9	02.4	94	93.8	06.6	154	153.6	10.7	214	213.5	14.9	274	273.3	19.1
35	34.9	02.4	95	94.8	06.6	155	154.6	10.8	215	214.5	15.0	275	274.3	19.2
36	35.9	02.5	96	95.8	06.7	156	155.6	10.9	216	215.5	15.1	276	275.3	19.3
37	36.9	02.6	97	96.8	06.8	157	156.6	11.0	217	216.5	15.1	277	276.3	19.3
38	37.9	02.7	98	97.8	06.8	158	157.6	11.0	218	217.5	15.2	278	277.3	19.4
39	38.9	02.7	99	98.8	06.9	159	158.6	11.1	219	218.5	15.3	279	278.3	19.5
40	**39.9**	**02.8**	**100**	**99.8**	**07.0**	**160**	**159.6**	**11.2**	**220**	**219.5**	**15.3**	**280**	**279.3**	**19.5**
41	40.9	02.9	101	100.8	07.0	161	160.6	11.2	221	220.5	15.4	281	280.3	19.6
42	41.9	02.9	102	101.8	07.1	162	161.6	11.3	222	221.5	15.5	282	281.3	19.7
43	42.9	03.0	103	102.7	07.2	163	162.6	11.4	223	222.5	15.6	283	282.3	19.7
44	43.9	03.1	104	103.7	07.3	164	163.6	11.4	224	223.5	15.6	284	283.3	19.8
45	44.9	03.1	105	104.7	07.3	165	164.6	11.5	225	224.5	15.7	285	284.3	19.9
46	45.9	03.2	106	105.7	07.4	166	165.6	11.6	226	225.4	15.8	286	285.3	20.0
47	46.9	03.3	107	106.7	07.5	167	166.6	11.6	227	226.4	15.8	287	286.3	20.0
48	47.9	03.3	108	107.7	07.5	168	167.6	11.7	228	227.4	15.9	288	287.3	20.1
49	48.9	03.4	109	108.7	07.6	169	168.6	11.8	229	228.4	16.0	289	288.3	20.2
50	**49.9**	**03.5**	**110**	**109.7**	**07.7**	**170**	**169.6**	**11.9**	**230**	**229.4**	**16.0**	**290**	**289.3**	**20.2**
51	50.9	03.6	111	110.7	07.7	171	170.6	11.9	231	230.4	16.1	291	290.3	20.3
52	51.9	03.6	112	111.7	07.8	172	171.6	12.0	232	231.4	16.2	292	291.3	20.4
53	52.9	03.7	113	112.7	07.9	173	172.6	12.1	233	232.4	16.3	293	292.3	20.4
54	53.9	03.8	114	113.7	08.0	174	173.6	12.1	234	233.4	16.3	294	293.3	20.5
55	54.9	03.8	115	114.7	08.0	175	174.6	12.2	235	234.4	16.4	295	294.3	20.6
56	55.9	03.9	116	115.7	08.1	176	175.6	12.3	236	235.4	16.5	296	295.3	20.6
57	56.9	04.0	117	116.7	08.2	177	176.6	12.3	237	236.4	16.5	297	296.3	20.7
58	57.9	04.0	118	117.7	08.2	178	177.6	12.4	238	237.4	16.6	298	297.3	20.8
59	58.9	04.1	119	118.7	08.3	179	178.6	12.5	239	238.4	16.7	299	298.3	20.9
60	**59.9**	**04.2**	**120**	**119.7**	**08.4**	**180**	**179.6**	**12.6**	**240**	**239.4**	**16.7**	**300**	**299.3**	**20.9**
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.1	61	60.8	05.3	121	120.5	10.5	181	180.3	15.8	241	240.1	21.0
2	02.0	00.2	62	61.8	05.4	122	121.5	10.6	182	181.3	15.9	242	241.1	21.1
3	03.0	00.3	63	62.8	05.5	123	122.5	10.7	183	182.3	15.9	243	242.1	21.2
4	04.0	00.3	64	63.8	05.6	124	123.5	10.8	184	183.3	16.0	244	243.1	21.3
5	05.0	00.4	65	64.8	05.7	125	124.5	10.9	185	184.3	16.1	245	244.1	21.4
6	06.0	00.5	66	65.7	05.8	126	125.5	11.0	186	185.3	16.2	246	245.1	21.4
7	07.0	00.6	67	66.7	05.8	127	126.5	11.1	187	186.3	16.3	247	246.1	21.5
8	08.0	00.7	68	67.7	05.9	128	127.5	11.2	188	187.3	16.4	248	247.1	21.6
9	09.0	00.8	69	68.7	06.0	129	128.5	11.2	189	188.3	16.5	249	248.1	21.7
10	10.0	00.9	70	69.7	06.1	130	129.5	11.3	190	189.3	16.6	250	249.0	21.8
11	11.0	01.0	71	70.7	06.2	131	130.5	11.4	191	190.3	16.6	251	250.0	21.9
12	12.0	01.0	72	71.7	06.3	132	131.5	11.5	192	191.3	16.7	252	251.0	22.0
13	13.0	01.1	73	72.7	06.4	133	132.5	11.6	193	192.3	16.8	253	252.0	22.1
14	13.9	01.2	74	73.7	06.4	134	133.5	11.7	194	193.3	16.9	254	253.0	22.1
15	14.9	01.3	75	74.7	06.5	135	134.5	11.8	195	194.3	17.0	255	254.0	22.2
16	15.9	01.4	76	75.7	06.6	136	135.5	11.9	196	195.3	17.1	256	255.0	22.3
17	16.9	01.5	77	76.7	06.7	137	136.5	11.9	197	196.3	17.2	257	256.0	22.4
18	17.9	01.6	78	77.7	06.8	138	137.5	12.0	198	197.2	17.3	258	257.0	22.5
19	18.9	01.7	79	78.7	06.9	139	138.5	12.1	199	198.2	17.3	259	258.0	22.6
20	19.9	01.7	80	79.7	07.0	140	139.5	12.2	200	199.2	17.4	260	259.0	22.7
21	20.9	01.8	81	80.7	07.1	141	140.5	12.3	201	200.2	17.5	261	260.0	22.7
22	21.9	01.9	82	81.7	07.1	142	141.5	12.4	202	201.2	17.6	262	261.0	22.8
23	22.9	02.0	83	82.7	07.2	143	142.5	12.5	203	202.2	17.7	263	262.0	22.9
24	23.9	02.1	84	83.7	07.3	144	143.5	12.6	204	203.2	17.8	264	263.0	23.0
25	24.9	02.2	85	84.7	07.4	145	144.4	12.6	205	204.2	17.9	265	264.0	23.1
26	25.9	02.3	86	85.7	07.5	146	145.4	12.7	206	205.2	18.0	266	265.0	23.2
27	26.9	02.4	87	86.7	07.6	147	146.4	12.8	207	206.2	18.0	267	266.0	23.3
28	27.9	02.4	88	87.7	07.7	148	147.4	12.9	208	207.2	18.1	268	267.0	23.4
29	28.9	02.5	89	88.7	07.8	149	148.4	13.0	209	208.2	18.2	269	268.0	23.4
30	29.9	02.6	90	89.7	07.8	150	149.4	13.1	210	209.2	18.3	270	269.0	23.5
31	30.9	02.7	91	90.7	07.9	151	150.4	13.2	211	210.2	18.4	271	270.0	23.6
32	31.9	02.8	92	91.6	08.0	152	151.4	13.2	212	211.2	18.5	272	271.0	23.7
33	32.9	02.9	93	92.6	08.1	153	152.4	13.3	213	212.2	18.6	273	272.0	23.8
34	33.9	03.0	94	93.6	08.2	154	153.4	13.4	214	213.2	18.7	274	273.0	23.9
35	34.9	03.1	95	94.6	08.3	155	154.4	13.5	215	214.2	18.7	275	274.0	24.0
36	35.9	03.1	96	95.6	08.4	156	155.4	13.6	216	215.2	18.8	276	274.9	24.1
37	36.9	03.2	97	96.6	08.5	157	156.4	13.7	217	216.2	18.9	277	275.9	24.1
38	37.9	03.3	98	97.6	08.5	158	157.4	13.8	218	217.2	19.0	278	276.9	24.2
39	38.9	03.4	99	98.6	08.6	159	158.4	13.9	219	218.2	19.1	279	277.9	24.3
40	39.8	03.5	100	99.6	08.7	160	159.4	13.9	220	219.2	19.2	280	278.9	24.4
41	40.8	03.6	101	100.6	08.8	161	160.4	14.0	221	220.2	19.3	281	279.9	24.5
42	41.8	03.7	102	101.6	08.9	162	161.4	14.1	222	221.2	19.3	282	280.9	24.6
43	42.8	03.7	103	102.6	09.0	163	162.4	14.2	223	222.2	19.4	283	281.9	24.7
44	43.8	03.8	104	103.6	09.1	164	163.4	14.3	224	223.1	19.5	284	282.9	24.8
45	44.8	03.9	105	104.6	09.2	165	164.4	14.4	225	224.1	19.6	285	283.9	24.8
46	45.8	04.0	106	105.6	09.2	166	165.4	14.5	226	225.1	19.7	286	284.9	24.9
47	46.8	04.1	107	106.6	09.3	167	166.4	14.6	227	226.1	19.8	287	285.9	25.0
48	47.8	04.2	108	107.6	09.4	168	167.4	14.6	228	227.1	19.9	288	286.9	25.1
49	48.8	04.3	109	108.6	09.5	169	168.4	14.7	229	228.1	20.0	289	287.9	25.2
50	49.8	04.4	110	109.6	09.6	170	169.4	14.8	230	229.1	20.0	290	288.9	25.3
51	50.8	04.4	111	110.6	09.7	171	170.3	14.9	231	230.1	20.1	291	289.9	25.4
52	51.8	04.5	112	111.6	09.8	172	171.3	15.0	232	231.1	20.2	292	290.9	25.4
53	52.8	04.6	113	112.6	09.8	173	172.3	15.1	233	232.1	20.3	293	291.9	25.5
54	53.8	04.7	114	113.6	09.9	174	173.3	15.2	234	233.1	20.4	294	292.9	25.6
55	54.8	04.8	115	114.6	10.0	175	174.3	15.3	235	234.1	20.5	295	293.9	25.7
56	55.8	04.9	116	115.6	10.1	176	175.3	15.3	236	235.1	20.6	296	294.9	25.8
57	56.8	05.0	117	116.6	10.2	177	176.3	15.4	237	236.1	20.7	297	295.9	25.9
58	57.8	05.1	118	117.6	10.3	178	177.3	15.5	238	237.1	20.7	298	296.9	26.0
59	58.8	05.1	119	118.5	10.4	179	178.3	15.6	239	238.1	20.8	299	297.9	26.1
60	59.8	05.2	120	119.5	10.5	180	179.3	15.7	240	239.1	20.9	300	298.9	26.1
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.1	61	60.7	06.4	121	120.3	12.6	181	180.0	18.9	241	239.7	25.2
2	02.0	00.2	62	61.7	06.5	122	121.3	12.8	182	181.0	19.0	242	240.7	25.3
3	03.0	00.3	63	62.7	06.6	123	122.3	12.9	183	182.0	19.1	243	241.7	25.4
4	04.0	00.4	64	63.6	06.7	124	123.3	13.0	184	183.0	19.2	244	242.7	25.5
5	05.0	00.5	65	64.6	06.8	125	124.3	13.1	185	184.0	19.3	245	243.7	25.6
6	06.0	00.6	66	65.6	06.9	126	125.3	13.2	186	185.0	19.4	246	244.7	25.7
7	07.0	00.7	67	66.6	07.0	127	126.3	13.3	187	186.0	19.5	247	245.6	25.8
8	08.0	00.8	68	67.6	07.1	128	127.3	13.4	188	187.0	19.7	248	246.6	25.9
9	09.0	00.9	69	68.6	07.2	129	128.3	13.5	189	188.0	19.8	249	247.6	26.0
10	09.9	01.0	70	69.6	07.3	130	129.3	13.6	190	189.0	19.9	250	248.6	26.1
11	10.9	01.1	71	70.6	07.4	131	130.3	13.7	191	190.0	20.0	251	249.6	26.2
12	11.9	01.3	72	71.6	07.5	132	131.3	13.8	192	190.9	20.1	252	250.6	26.3
13	12.9	01.4	73	72.6	07.6	133	132.3	13.9	193	191.9	20.2	253	251.6	26.4
14	13.9	01.5	74	73.6	07.7	134	133.3	14.0	194	192.9	20.3	254	252.6	26.6
15	14.9	01.6	75	74.6	07.8	135	134.3	14.1	195	193.9	20.4	255	253.6	26.7
16	15.9	01.7	76	75.6	07.9	136	135.3	14.2	196	194.9	20.5	256	254.6	26.8
17	16.9	01.8	77	76.6	08.0	137	136.2	14.3	197	195.9	20.6	257	255.6	26.9
18	17.9	01.9	78	77.6	08.2	138	137.2	14.4	198	196.9	20.7	258	256.6	27.0
19	18.9	02.0	79	78.6	08.3	139	138.2	14.5	199	197.9	20.8	259	257.6	27.1
20	19.9	02.1	80	79.6	08.4	140	139.2	14.6	200	198.9	20.9	260	258.6	27.2
21	20.9	02.2	81	80.6	08.5	141	140.2	14.7	201	199.9	21.0	261	259.6	27.3
22	21.9	02.3	82	81.6	08.6	142	141.2	14.8	202	200.9	21.1	262	260.6	27.4
23	22.9	02.4	83	82.5	08.7	143	142.2	14.9	203	201.9	21.2	263	261.6	27.5
24	23.9	02.5	84	83.5	08.8	144	143.2	15.1	204	202.9	21.3	264	262.6	27.6
25	24.9	02.6	85	84.5	08.9	145	144.2	15.2	205	203.9	21.4	265	263.5	27.7
26	25.9	02.7	86	85.5	09.0	146	145.2	15.3	206	204.9	21.5	266	264.5	27.8
27	26.9	02.8	87	86.5	09.1	147	146.2	15.4	207	205.9	21.6	267	265.5	27.9
28	27.8	02.9	88	87.5	09.2	148	147.2	15.5	208	206.9	21.7	268	266.5	28.0
29	28.8	03.0	89	88.5	09.3	149	148.2	15.6	209	207.9	21.8	269	267.5	28.1
30	29.8	03.1	90	89.5	09.4	150	149.2	15.7	210	208.8	22.0	270	268.5	28.2
31	30.8	03.2	91	90.5	09.5	151	150.2	15.8	211	209.8	22.1	271	269.5	28.3
32	31.8	03.3	92	91.5	09.6	152	151.2	15.9	212	210.8	22.2	272	270.5	28.4
33	32.8	03.4	93	92.5	09.7	153	152.2	16.0	213	211.8	22.3	273	271.5	28.5
34	33.8	03.6	94	93.5	09.8	154	153.2	16.1	214	212.8	22.4	274	272.5	28.6
35	34.8	03.7	95	94.5	09.9	155	154.2	16.2	215	213.8	22.5	275	273.5	28.7
36	35.8	03.8	96	95.5	10.0	156	155.1	16.3	216	214.8	22.6	276	274.5	28.8
37	36.8	03.9	97	96.5	10.1	157	156.1	16.4	217	215.8	22.7	277	275.5	29.0
38	37.8	04.0	98	97.5	10.2	158	157.1	16.5	218	216.8	22.8	278	276.5	29.1
39	38.8	04.1	99	98.5	10.3	159	158.1	16.6	219	217.8	22.9	279	277.5	29.2
40	39.8	04.2	100	99.5	10.5	160	159.1	16.7	220	218.8	23.0	280	278.5	29.3
41	40.8	04.3	101	100.4	10.6	161	160.1	16.8	221	219.8	23.1	281	279.5	29.4
42	41.8	04.4	102	101.4	10.7	162	161.1	16.9	222	220.8	23.2	282	280.5	29.5
43	42.8	04.5	103	102.4	10.8	163	162.1	17.0	223	221.8	23.3	283	281.4	29.6
44	43.8	04.6	104	103.4	10.9	164	163.1	17.1	224	222.8	23.4	284	282.4	29.7
45	44.8	04.7	105	104.4	11.0	165	164.1	17.2	225	223.8	23.5	285	283.4	29.8
46	45.7	04.8	106	105.4	11.1	166	165.1	17.4	226	224.8	23.6	286	284.4	29.9
47	46.7	04.9	107	106.4	11.2	167	166.1	17.5	227	225.8	23.7	287	285.4	30.0
48	47.7	05.0	108	107.4	11.3	168	167.1	17.6	228	226.8	23.8	288	286.4	30.1
49	48.7	05.1	109	108.4	11.4	169	168.1	17.7	229	227.7	23.9	289	287.4	30.2
50	49.7	05.2	110	109.4	11.5	170	169.1	17.8	230	228.7	24.0	290	288.4	30.3
51	50.7	05.3	111	110.4	11.6	171	170.1	17.9	231	229.7	24.1	291	289.4	30.4
52	51.7	05.4	112	111.4	11.7	172	171.1	18.0	232	230.7	24.3	292	290.4	30.5
53	52.7	05.5	113	112.4	11.8	173	172.1	18.1	233	231.7	24.4	293	291.4	30.6
54	53.7	05.6	114	113.4	11.9	174	173.0	18.2	234	232.7	24.5	294	292.4	30.7
55	54.7	05.7	115	114.4	12.0	175	174.0	18.3	235	233.7	24.6	295	293.4	30.8
56	55.7	05.9	116	115.4	12.1	176	175.0	18.4	236	234.7	24.7	296	294.4	30.9
57	56.7	06.0	117	116.4	12.2	177	176.0	18.5	237	235.7	24.8	297	295.4	31.0
58	57.7	06.1	118	117.4	12.3	178	177.0	18.6	238	236.7	24.9	298	296.4	31.1
59	58.7	06.2	119	118.3	12.4	179	178.0	18.7	239	237.7	25.0	299	297.4	31.3
60	59.7	06.3	120	119.3	12.5	180	179.0	18.8	240	238.7	25.1	300	298.4	31.4
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.1	61	60.5	07.4	121	120.1	14 7	181	179.7	22.1	241	239.2	29.4
2	02.0	00.2	62	61.5	07.6	122	121.1	14.9	182	180.6	22.2	242	240.2	29.5
3	03.0	00.4	63	62.5	07.7	123	122.1	15.0	183	181.6	22.3	243	241.2	29.6
4	04 0	00.5	64	63.5	07.8	124	123.1	15.1	184	182.6	22.4	244	242.2	29.7
5	05.0	00.6	65	64.5	07.9	125	124.1	15.2	185	183.6	22.5	245	243.2	29.9
6	06.0	00.7	66	65.5	08.0	126	125.1	15.4	186	184.6	22.7	246	244.2	30.0
7	06.9	00.9	67	66.5	08.2	127	126.1	15.5	187	185.6	22.8	247	245.2	30.1
8	07.9	01.0	68	67.5	08.3	128	127.0	15.6	188	186.6	22.9	248	246.2	30.2
9	08.9	01.1	69	68.5	08.4	129	128.0	15.7	189	187.6	23.0	249	247.1	30.3
10	09.9	01.2	70	69.5	08.5	130	129.0	15.8	190	188.6	23.2	250	248.1	30.5
11	10.9	01.3	71	70.5	08.7	131	130.0	16.0	191	189.6	23.3	251	249.1	30.6
12	11.9	01.5	72	71.5	08.8	132	131.0	16.1	192	190.6	23.4	252	250.1	30.7
13	12.9	01.6	73	72.5	08.9	133	132.0	16.2	193	191.6	23.5	253	251.1	30.8
14	13.9	01.7	74	73.4	09.0	134	133.0	16.3	194	192.6	23.6	254	252.1	31.0
15	14.9	01.8	75	74.4	09.1	135	134.0	16.5	195	193.5	23.8	255	253.1	31.1
16	15 9	01.9	76	75.4	09.3	136	135.0	16.6	196	194.5	23.9	256	254.1	31.2
17	16.9	02.1	77	76.4	09.4	137	136.0	16.7	197	195.5	24.0	257	255.1	31.3
18	17.9	02.2	78	77.4	09.5	138	137.0	16.8	198	196.5	24.1	258	256.1	31·4
19	18.9	02.3	79	78.4	09.6	139	138.0	16.9	199	197.5	24.3	259	257.1	31.6
20	19.9	02.4	80	79.4	09.7	140	139.0	17.1	200	198.5	24.4	260	258.1	31.7
21	20.8	02.6	81	80.4	09.9	141	139.9	17.2	201	199.5	24.5	261	259.1	31.8
22	21.8	02.7	82	81.4	10.0	142	140.9	17.3	202	200.5	24.6	262	260.0	31.9
23	22.8	02.8	83	82.4	10.1	143	141.9	17.4	203	201.5	24.7	263	261.0	32.1
24	23.8	02.9	84	83.4	10.2	144	142.9	17.5	204	202.5	24.9	264	262.0	32.2
25	24.8	03.0	85	84.4	10.4	145	143.9	17.7	205	203.5	25.0	265	263.0	32.3
26	25.8	03 2	86	85.4	10.5	146	144.9	17.8	206	204.5	25.1	266	264.0	32.4
27	26.8	03.3	87	86.4	10.6	147	145.9	17.9	207	205.5	25.2	267	265.0	32.5
28	27.8	03.4	88	87.3	10.7	148	146.9	18.0	208	206.4	25.3	268	266.0	32.7
29	28.8	03.5	89	88.3	10.8	149	147.9	18.2	209	207.4	25.5	269	267.0	32.8
30	29.8	03.7	90	89.3	11.0	150	148.9	18.3	210	208.4	25.6	270	268.0	32.9
31	30.8	03.8	91	90.3	11.1	151	149.9	18.4	211	209.4	25.7	271	269.0	33.0
32	31.8	03.9	92	91.3	11.2	152	150.9	18.5	212	210.4	25.8	272	270.0	33.1
33	32.8	04.0	93	92.3	11.3	153	151.9	18.6	213	211.4	26.0	273	271.0	33.3
34	33.7	04.1	94	93.3	11.5	154	152.9	18.8	214	212.4	26.1	274	272.0	33.4
35	34.7	04.3	95	94.3	11.6	155	153.8	18.9	215	213.4	26.2	275	273.0	33.5
36	35.7	04.4	96	95.3	11.7	156	154.8	19.0	216	214.4	26.3	276	273.9	33.6
37	36.7	04.5	97	96.3	11.8	157	155.8	19.1	217	215.4	26.4	277	274.9	33.8
38	37 7	04.6	98	97.3	11.9	158	156.8	19.3	218	216.4	26.6	278	275.9	33.9
39	38.7	04.8	99	98.3	12.1	159	157 8	19.4	219	217.4	26.7	279	276.9	34.0
40	39.7	04.9	100	99.3	12.2	160	158.8	19.5	220	218.4	26.8	280	277.9	34.1
41	40.7	05.0	101	100.2	12.3	161	159.8	19.6	221	219.4	26.9	281	278.9	34.2
42	41.7	05.1	102	101.2	12.4	162	160.8	19.7	222	220.3	27.1	282	279.9	34.4
43	42.7	05.2	103	102.2	12.6	163	161.8	19.9	223	221.3	27.2	283	280.9	34.5
44	43.7	05.4	104	103.2	12.7	164	162.8	20.0	224	222.3	27.3	284	281.9	34.6
45	44.7	05.5	105	104.2	12.8	165	163.8	20.1	225	223.3	27.4	285	282.9	34.7
46	45.7	05.6	106	105.2	12.9	166	164.8	20.2	226	224.3	27.5	286	283.9	34.9
47	46.6	05.7	107	106.2	13.0	167	165.8	20.4	227	225.3	27.7	287	284.9	35.0
48	47.6	05.8	108	107.2	13.2	168	166.7	20.5	228	226.3	27.8	288	285.9	35.1
49	48.6	06.0	109	108.2	13.3	169	167.7	20.6	229	227.3	27.9	289	286.8	35.2
50	49.6	06.1	110	109.2	13.4	170	168.7	20.7	230	228.3	28.0	290	287.8	35.3
51	50.6	06.2	111	110.2	13.5	171	169.7	20.8	231	229.3	28.2	291	288.8	35.5
52	51.6	06.3	112	111.2	13.6	172	170.7	21.0	232	230.3	28.3	292	289.8	35.6
53	52.6	06.5	113	112.2	13.8	173	171.7	21.1	233	231.3	28.4	293	290.8	35.7
54	53.6	06.6	114	113.2	13.9	174	172.7	21.2	234	232.3	28.5	294	291.8	35.8
55	54.6	06.7	115	114.1	14.0	175	173.7	21.3	235	233.2	28.6	295	292.8	36.0
56	55.6	06.8	116	115.1	14.1	176	174.7	21.4	236	234.2	28.8	296	293.8	36.1
57	56.6	06.9	117	116.1	14.3	177	175.7	21.6	237	235.2	28.9	297	294.8	36.2
58	57.6	07.1	118	117.1	14.4	178	176.7	21.7	238	236.2	29.0	298	295.8	36.3
59	58.6	07.2	119	118.1	14.5	179	177.7	21.8	239	237.2	29.1	299	296.8	36.4
60	59.6	07.3	120	119.1	14.6	180	178.7	21.9	240	238.2	29.2	300	297.8	36.6
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.1	61	60.4	08.5	121	119.8	16.8	181	179 2	25.2	241	238.7	33.5
2	02.0	00.3	62	61.4	08.6	122	120.8	17.0	182	180.2	25.3	242	239.6	33.7
3	03.0	00.4	63	62.4	08.8	123	121.8	17.1	183	181.2	25.5	243	240.6	33.8
4	04.0	00.6	64	63.4	08.9	124	122.8	17.3	184	182.2	25.6	244	241.6	34.0
5	05.0	00.7	65	64.4	09.0	125	123.8	17.4	185	183.2	25.7	245	242.6	34.1
6	05.9	00.8	66	65.4	09.2	126	124.8	17.5	186	184.2	25.9	246	243.6	34.2
7	06.9	01.0	67	66.3	09.3	127	125.8	17.7	187	185.2	26.0	247	244.6	34.4
8	07.9	01.1	68	67.3	09.5	128	126.8	17.8	188	186.2	26.2	248	245.6	34.5
9	08 9	01.3	69	68.3	09.6	129	127.7	18.0	189	187.2	26.3	249	246.6	34.7
10	09.9	01.4	70	69.3	09.7	130	128.7	18.1	190	188.2	26.4	250	247.6	34.8
11	10.9	01.5	71	70.3	09.9	131	129.7	18.2	191	189.1	26.6	251	248.6	34.9
12	11.9	01.7	72	71.3	10.0	132	130.7	18.4	192	190.1	26.7	252	249.5	35.1
13	12.9	01.8	73	72.3	10.2	133	131.7	18.5	193	191.1	26.9	253	250.5	35.2
14	13.9	01.9	74	73.3	10.3	134	132.7	18.6	194	192.1	27.0	254	251.5	35.3
15	14.9	02.1	75	74.3	10.4	135	133.7	18.8	195	193.1	27.1	255	252.5	35.5
16	15.8	02.2	76	75.3	10.6	136	134·7	18.9	196	194.1	27.3	256	253.5	35.6
17	16.8	02.4	77	76.3	10.7	137	135.7	19.1	197	195.1	27.4	257	254.5	35.8
18	17.8	02.5	78	77.2	10.9	138	136.7	19.2	198	196.1	27.6	258	255.5	35.9
19	18.8	02.6	79	78.2	11.0	139	137.7	19.3	199	197.1	27.7	259	256.5	36.0
20	19.8	02.8	80	79.2	11.1	140	138.6	19.5	200	198.1	27.8	260	257.5	36.2
21	20.8	02.9	81	80.2	11.3	141	139.6	19.6	201	199.0	28.0	261	258.5	36.3
22	21.8	03.1	82	81.2	11.4	142	140.6	19.8	202	200.0	28.1	262	259.5	36.5
23	22.8	03.2	83	82.2	11.6	143	141.6	19.9	203	201.0	28.3	263	260.4	36.6
24	23.8	03.3	84	83.2	11.7	144	142.6	20.0	204	202.0	28.4	264	261.4	36.7
25	24.8	03.5	85	84.2	11.8	145	143.6	20.2	205	203.0	28.5	265	262.4	36.9
26	25.7	03.6	86	85.2	12.0	146	144.6	20.3	206	204.0	28.7	266	263.4	37.0
27	26.7	03.8	87	86.2	12.1	147	145.6	20.5	207	205.0	28.8	267	264.4	37.2
28	27.7	03.9	88	87.1	12.2	148	146.6	20.6	208	206.0	28.9	268	265.4	37.3
29	28.7	04.0	89	88.1	12.4	149	147.5	20.7	209	207.0	29.1	269	266.4	37.4
30	29.7	04.2	90	89.1	12.5	150	148.5	20.9	210	208.0	29.2	270	267.4	37.6
31	30.7	04.3	91	90.1	12.7	151	149.5	21.0	211	208.9	29.4	271	268.4	37.7
32	31.7	04.5	92	91.1	12.8	152	150.5	21.2	212	209.9	29.5	272	269.4	37.9
33	32.7	04.6	93	92.1	12 9	153	151.5	21.3	213	210.9	29.6	273	270.3	38.0
34	33.7	04.7	94	93.1	13.1	154	152.5	21.4	214	211.9	29.8	274	271.3	38.1
35	34.7	04.9	95	94.1	13.2	155	153.5	21.6	215	212.9	29.9	275	272.3	38.3
36	35.6	05.0	96	95.1	13.4	156	154.5	21.7	216	213.9	30.1	276	273.3	38.4
37	36.6	05.1	97	96.1	13.5	157	155.5	21.9	217	214.9	30.2	277	274.3	38.6
38	37.6	05.3	98	97.0	13.6	158	156.5	22.0	218	215.9	30.3	278	275.3	38.7
39	38.6	05.4	99	98.0	13.8	159	157.5	22.1	219	216.9	30.5	279	276.3	38.8
40	39.6	05.6	100	99.0	13.9	160	158.4	22.3	220	217.9	30.6	280	277.3	39.0
41	40.6	05.7	101	100.0	14.1	161	159.4	22.4	221	218.8	30.8	281	278.3	39.1
42	41.6	05.8	102	101.0	14.2	162	160.4	22.5	222	219.8	30.9	282	279.3	39.2
43	42.6	06.0	103	102.0	14.3	163	161.4	22.7	223	220.8	31.0	283	280.2	39.4
44	43.6	06.1	104	103.0	14.5	164	162.4	22.8	224	221.8	31.2	284	281.2	39.5
45	44.6	06.3	105	104.0	14.6	165	163.4	23.0	225	222.8	31.3	285	282.2	39.7
46	45.6	06.4	106	105.0	14.8	166	164.4	23.1	226	223.8	31.5	286	283.2	39.8
47	46.5	06.5	107	106.0	14.9	167	165.4	23.2	227	224 8	31.6	287	284.2	39.9
48	47.5	06.7	108	106.9	15.0	168	166.4	23.4	228	225.8	31.7	288	285.2	40.1
49	48.5	06.8	109	107.9	15.2	169	167.4	23.5	229	226.8	31.9	289	286.2	40.2
50	49.5	07.0	110	108.9	15.3	170	168.3	23.7	230	227.8	32.0	290	287.2	40.4
51	50.5	07.1	111	109.9	15.4	171	169.3	23.8	231	228.8	32.1	291	288.2	40.5
52	51.5	07.2	112	110.9	15.6	172	170.3	23.9	232	229.7	32.3	292	289.2	40.6
53	52.5	07.4	113	111.9	15.7	173	171.3	24.1	233	230.7	32.4	293	290.1	40.8
54	53.5	07.5	114	112.9	15.9	174	172.3	24.2	234	231.7	32.6	294	291.1	40.9
55	54.5	07.7	115	113.9	16.0	175	173.3	24.4	235	232.7	32.7	295	292.1	41.1
56	55.5	07.8	116	114 9	16.1	176	174.3	24.5	236	233.7	32.8	296	293.1	41.2
57	56.4	07.9	117	115.9	16.3	177	175.3	24.6	237	234.7	33.0	297	294.1	41.3
58	57.4	08.1	118	116.9	16.4	178	176.3	24.8	238	235.7	33.1	298	295.1	41.5
59	58.4	08.2	119	117.8	16.6	179	177.3	24.9	239	236.7	33.3	299	296.1	41.6
60	59.4	08.4	120	118.8	16.7	180	178.2	25.1	240	237.7	33.4	300	297.1	41.8
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.2	61	60.2	09.5	121	119.5	18.9	181	178.8	28.3	241	238.0	37.7
2	02.0	00.3	62	61.2	09.7	122	120.5	19.1	182	179.8	28.5	242	239.0	37.9
3	03.0	00.5	63	62.2	09.9	123	121.5	19.2	183	180.7	28.6	243	240.0	38.0
4	04.0	00.6	64	63.2	10.0	124	122.5	19.4	184	181.7	28.8	244	241.0	38.2
5	04.9	00.8	65	64.2	10.2	125	123.5	19.6	185	182.7	28.9	245	242.0	38.3
6	05.9	00.9	66	65.2	10.3	126	124.4	19.7	186	183.7	29.1	246	243.0	38.5
7	06.9	01.1	67	66.2	10.5	127	125.4	19.9	187	184.7	29.3	247	244.0	38.6
8	07.9	01.3	68	67.2	10.6	128	126.4	20.0	188	185.7	29.4	248	244.9	38.8
9	08.9	01.4	69	68.2	10.8	129	127.4	20.2	189	186.7	29.6	249	245.9	39.0
10	**09.9**	**01.6**	**70**	**69.1**	**11.0**	**130**	**128.4**	**20.3**	**190**	**187.7**	**29.7**	**250**	**246.9**	**39.1**
11	10.9	01.7	71	70.1	11.1	131	129.4	20.5	191	188.6	29.9	251	247.9	39 3
12	11.9	01.9	72	71.1	11.3	132	130.4	20.6	192	189.6	30.0	252	248.9	39.4
13	12.8	02.0	73	72.1	11.4	133	131.4	20.8	193	190.6	30.2	253	249.9	39.6
14	13.8	02.2	74	73.1	11.6	134	132.4	21.0	194	191.6	30.3	254	250.9	39.7
15	14.8	02.3	75	74.1	11.7	135	133.3	21.1	195	192.6	30.5	255	251.9	39 9
16	15.8	02.5	76	75.1	11.9	136	134.3	21.3	196	193.6	30.7	256	252.8	40.0
17	16.8	02.7	77	76.1	12.0	137	135.3	21.4	197	194.6	30.8	257	253.8	40.2
18	17.8	02.8	78	77.0	12.2	138	136.3	21.6	198	195.6	31.0	258	254.8	40.4
19	18.8	03.0	79	78.0	12.4	139	137.3	21.7	199	196.5	31.1	259	255.8	40.5
20	**19.8**	**03.1**	**80**	**79.0**	**12.5**	**140**	**138.3**	**21.9**	**200**	**197.5**	**31.3**	**260**	**256.8**	**40.7**
21	20.7	03.3	81	80.0	12.7	141	139.3	22.1	201	198.5	31.4	261	257.8	40.8
22	21.7	03.4	82	81.0	12.8	142	140.3	22.2	202	199.5	31.6	262	258.8	41.0
23	22.7	03.6	83	82.0	13.0	143	141.2	22.4	203	200.5	31.8	263	259.8	41.1
24	23.7	03.8	84	83.0	13.1	144	142.2	22.5	204	201.5	31.9	264	260.7	41.3
25	24.7	03.9	85	84.0	13.3	145	143.2	22.7	205	202.5	32.1	265	261.7	41.5
26	25.7	04.1	86	84.9	13.5	146	144.2	22.8	206	203.5	32.2	266	262.7	41.6
27	26.7	04.2	87	85.9	13.6	147	145.2	23.0	207	204.5	32.4	267	263.7	41.8
28	27.7	04.4	88	86.9	13.8	148	146.2	23.2	208	205.4	32.5	268	264.7	41.9
29	28.6	04.5	89	87.9	13.9	149	147.2	23.3	209	206.4	32.7	269	265.7	42.1
30	**29.6**	**04.7**	**90**	**88.9**	**14.1**	**150**	**148.2**	**23.5**	**210**	**207.4**	**32.9**	**270**	**266.7**	**42.2**
31	30.6	04.8	91	89.9	14.2	151	149.1	23.6	211	208.4	33.0	271	267.7	42.4
32	31.6	05.0	92	90.9	14.4	152	150.1	23.8	212	209.4	33.2	272	268.7	42.6
33	32.6	05.2	93	91.9	14.5	153	151.1	23.9	213	210.4	33.3	273	269.6	42.7
34	33.6	05.3	94	92.8	14.7	154	152.1	24.1	214	211.4	33.5	274	270.6	42 9
35	34.6	05.5	95	93 8	14.9	155	153.1	24.2	215	212.4	33.6	275	271.6	43.0
36	35.6	05.6	96	94.8	15.0	156	154.1	24.4	216	213.3	33.8	276	272.6	43.2
37	36.5	05.8	97	95.8	15.2	157	155.1	24.6	217	214.3	33.9	277	273.6	43.3
38	37.5	05.9	98	96.8	15.3	158	156.1	24.7	218	215.3	34.1	278	274.6	43·5
39	38.5	06.1	99	97.8	15.5	159	157.0	24.9	219	216.3	34.3	279	275.6	43.6
40	**39.5**	**06.3**	**100**	**98.8**	**15.6**	**160**	**158.0**	**25.0**	**220**	**217.3**	**34.4**	**280**	**276.6**	**43.8**
41	40.5	06.4	101	99.8	15.8	161	159.0	25.2	221	218.3	34.6	281	277.5	44.0
42	41.5	06.6	102	100.7	16.0	162	160.0	25.3	222	219.3	34.7	282	278.5	44.1
43	42.5	06.7	103	101.7	16.1	163	161.0	25.5	223	220.3	34.9	283	279.5	44.3
44	43.5	06.9	104	102.7	16.3	164	162.0	25.7	224	221.2	35.0	284	280.5	44.4
45	44.4	07.0	105	103.7	16.4	165	163.0	25.8	225	222.2	35.2	285	281.5	44.6
46	45.4	07.2	106	104.7	16.6	166	164.0	26.0	226	223.2	35.4	286	282.5	44.7
47	46.4	07.4	107	105.7	16.7	167	164.9	26.1	227	224.2	35.5	287	283.5	44.9
48	47.4	07.5	108	106.7	16.9	168	165.9	26.3	228	225.2	35.7	288	284.5	45.1
49	48.4	07.7	109	107.7	17.1	169	166.9	26.4	229	226.2	35.8	289	285.4	45.2
50	**49.4**	**07.8**	**110**	**108.6**	**17.2**	**170**	**167.9**	**26.6**	**230**	**227.2**	**36.0**	**290**	**286.4**	**45.4**
51	50.4	08.0	111	109.6	17.4	171	168.9	26.8	231	228.2	36.1	291	287.4	45.5
52	51.4	08.1	112	110.6	17.5	172	169.9	26.9	232	229.1	36.3	292	288.4	45.7
53	52.3	08.3	113	111.6	17.7	173	170.9	27.1	233	230.1	36.4	293	289.4	45.8
54	53.3	08.4	114	112.6	17.8	174	171.9	27.2	234	231.1	36.6	294	290.4	46.0
55	54.3	08.6	115	113.6	18.0	175	172.8	27.4	235	232.1	36.8	295	291.4	46.1
56	55.3	08.8	116	114.6	18.1	176	173.8	27.5	236	233.1	36.9	296	292.4	46.3
57	56.3	08.9	117	115.6	18.3	177	174.8	27.7	237	234.1	37.1	297	293.3	46.5
58	57.3	09.1	118	116.5	18.5	178	175.8	27.8	238	235.1	37.2	298	294.3	46.6
59	58.3	09.2	119	117.5	18.6	179	176.8	28.0	239	236.1	37.4	299	295.3	46.8
60	**59.3**	**09.4**	**120**	**118.5**	**18.8**	**180**	**177.8**	**28.2**	**240**	**237.0**	**37.5**	**300**	**296.3**	**46.9**
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.2	61	60.1	10.6	121	119.2	21.0	181	178.3	31.4	241	237.3	41.8
2	02.0	00.3	62	61.1	10.8	122	120.1	21.2	182	179.2	31.6	242	238.3	42.0
3	03.0	00.5	63	62.0	10.9	123	121.1	21.4	183	180.2	31.8	243	239.3	42.2
4	03.9	00.7	64	63.0	11.1	124	122.1	21.5	184	181.2	32.0	244	240.3	42.4
5	04.9	00.9	65	64.0	11.3	125	123.1	21.7	185	182.2	32.1	245	241.3	42.5
6	05.9	01.0	66	65.0	11.5	126	124.1	21.9	186	183.2	32.3	246	242.3	42.7
7	06.9	01.2	67	66.0	11.6	127	125.1	22.1	187	184.2	32.5	247	243.2	42.9
8	07.9	01.4	68	67.0	11.8	128	126.1	22.2	188	185.1	32.6	248	244.2	43.1
9	08.9	01.6	69	68.0	12.0	129	127.0	22.4	189	186.1	32.8	249	245.2	43.2
10	**09.8**	**01.7**	**70**	**68.9**	**12.2**	**130**	**128.0**	**22.6**	**190**	**187.1**	**33.0**	**250**	**246.2**	**43.4**
11	10.8	01.9	71	69.9	12.3	131	129.0	22.7	191	188.1	33.2	251	247.2	43.6
12	11.8	02.1	72	70.9	12.5	132	130.0	22.9	192	189.1	33.3	252	248.2	43.8
13	12.8	02.3	73	71.9	12.7	133	131.0	23.1	193	190.1	33.5	253	249.2	43.9
14	13.8	02.4	74	72.9	12.8	134	132.0	23.3	194	191.1	33.7	254	250.1	44.1
15	14.8	02.6	75	73.9	13.0	135	132.9	23.4	195	192.0	33.9	255	251.1	44.3
16	15.8	02.8	76	74.8	13.2	136	133.9	23.6	196	193.0	34.0	256	252.1	44.5
17	16.7	03.0	77	75.8	13.4	137	134.9	23.8	197	194.0	34.2	257	253.1	44.6
18	17.7	03.1	78	76.8	13.5	138	135.9	24.0	198	195.0	34.4	258	254.1	44.8
19	18.7	03.3	79	77.8	13.7	139	136.9	24.1	199	196.0	34.6	259	255.1	45.0
20	**19.7**	**03.5**	**80**	**78.8**	**13.9**	**140**	**137.9**	**24.3**	**200**	**197.0**	**34.7**	**260**	**256.1**	**45.1**
21	20.7	03.6	81	79.8	14.1	141	138.9	24.5	201	197.9	34.9	261	257.0	45.3
22	21.7	03.8	82	80.8	14.2	142	139.8	24.7	202	198.9	35.1	262	258.0	45.5
23	22.7	04.0	83	81.7	14.4	143	140.8	24.8	203	199.9	35.3	263	259.0	45.7
24	23.6	04.2	84	82.7	14.6	144	141.8	25.0	204	200.9	35.4	264	260.0	45.8
25	24.6	04.3	85	83.7	14.8	145	142.8	25.2	205	201.9	35.6	265	261.0	46.0
26	25.6	04.5	86	84.7	14.9	146	143.8	25.4	206	202.9	35.8	266	262.0	46.2
27	26.6	04.7	87	85.7	15.1	147	144.8	25.5	207	203.9	35.9	267	262.9	46.4
28	27.6	04.9	88	86.7	15.3	148	145.8	25.7	208	204.8	36.1	268	263.9	46.5
29	28.6	05.0	89	87.6	15.5	149	146.7	25.9	209	205.8	36.3	269	264.9	46.7
30	**29.5**	**05.2**	**90**	**88.6**	**15.6**	**150**	**147.7**	**26.0**	**210**	**206.8**	**36.5**	**270**	**265.9**	**46.9**
31	30.5	05.4	91	89.6	15.8	151	148.7	26.2	211	207.8	36.6	271	266.9	47.1
32	31.5	05.6	92	90.6	16.0	152	149.7	26.4	212	208.8	36.8	272	267.9	47.2
33	32.5	05.7	93	91.6	16.1	153	150.7	26.6	213	209.8	37.0	273	268.9	47.4
34	33.5	05.9	94	92.6	16.3	154	151.7	26.7	214	210.7	37.2	274	269.8	47.6
35	34.5	06.1	95	93.6	16.5	155	152.6	26.9	215	211.7	37.3	275	270.8	47.8
36	35.5	06.3	96	94.5	16.7	156	153.6	27.1	216	212.7	37.5	276	271.8	47.9
37	36.4	06.4	97	95.5	16.8	157	154.6	27.3	217	213.7	37.7	277	272.8	48.1
38	37.4	06.6	98	96.5	17.0	158	155.6	27.4	218	214.7	37.9	278	273.8	48.3
39	38.4	06.8	99	97.5	17.2	159	156.6	27.6	219	215.7	38.0	279	274.8	48.4
40	**39.4**	**06.9**	**100**	**98.5**	**17.4**	**160**	**157.6**	**27.8**	**220**	**216.7**	**38.2**	**280**	**275.7**	**48.6**
41	40.4	07.1	101	99.5	17.5	161	158.6	28.0	221	217.6	38.4	281	276.7	48.8
42	41.4	07.3	102	100.5	17.7	162	159.5	28.1	222	218.6	38.5	282	277.7	49.0
43	42.3	07.5	103	101.4	17.9	163	160.5	28.3	223	219.6	38.7	283	278.7	49.1
44	43.3	07.6	104	102.4	18.1	164	161.5	28.5	224	220.6	38.9	284	279.7	49.3
45	44.3	07.8	105	103.4	18.2	165	162.5	28.7	225	221.6	39.1	285	280.7	49.5
46	45.3	08.0	106	104.4	18.4	166	163.5	28.8	226	222.6	39.2	286	281.7	49.7
47	46.3	08.2	107	105.4	18.6	167	164.5	29.0	227	223.6	39.4	287	282.6	49.8
48	47.3	08.3	108	106.4	18.8	168	165.4	29.2	228	224.5	39.6	288	283.6	50.0
49	48.3	08.5	109	107.3	18.9	169	166.4	29.3	229	225.5	39.8	289	284.6	50.2
50	**49.2**	**08.7**	**110**	**108.3**	**19.1**	**170**	**167.4**	**29.5**	**230**	**226.5**	**39.9**	**290**	**285.6**	**50.4**
51	50.2	08.9	111	109.3	19.3	171	168.4	29.7	231	227.5	40.1	291	286.6	50.5
52	51.2	09.0	112	110.3	19.4	172	169.4	29.9	232	228.5	40.3	292	287.6	50.7
53	52.2	09.2	113	111.3	19.6	173	170.4	30.0	233	229.5	40.5	293	288.5	50.9
54	53.2	09.4	114	112.3	19.8	174	171.4	30.2	234	230.4	40.6	294	289.5	51.1
55	54.2	09.6	115	113.3	20.0	175	172.3	30.4	235	231.4	40.8	295	290.5	51.2
56	55.1	09.7	116	114.2	20.1	176	173.3	30.6	236	232.4	41.0	296	291.5	51.4
57	56.1	09.9	117	115.2	20.3	177	174.3	30.7	237	233.4	41.2	297	292.5	51.6
58	57.1	10.1	118	116.2	20.5	178	175.3	30.9	238	234.4	41.3	298	293.5	51.7
59	58.1	10.2	119	117.2	20.7	179	176.3	31.1	239	235.4	41.5	299	294.5	51.9
60	**59.1**	**10.4**	**120**	**118.2**	**20.8**	**180**	**177.3**	**31.3**	**240**	**236.4**	**41.7**	**300**	**295.4**	**52.1**
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.2	61	59.9	11.6	121	118.8	23.1	181	177.7	34.5	241	236.6	46.0
2	02.0	00.4	62	60.9	11.8	122	119.8	23.3	182	178.7	34.7	242	237.6	46.2
3	02.9	00.6	63	61.8	12.0	123	120.7	23.5	183	179.6	34.9	243	238.5	46.4
4	03.9	00.8	64	62.8	12.2	124	121.7	23.7	184	180.6	35.1	244	239.5	46.6
5	04.9	01.0	65	63.8	12.4	125	122.7	23.9	185	181.6	35.3	245	240.5	46.7
6	05.9	01.1	66	64.8	12.6	126	123.7	24.0	186	182.6	35.5	246	241.5	46.9
7	06.9	01.3	67	65.8	12.8	127	124.7	24.2	187	183.6	35.8	247	242.5	47.1
8	07.9	01.5	68	66.8	13.0	128	125.6	24.4	188	184.5	35.9	248	243.4	47.3
9	08.8	01.7	69	67.7	13.2	129	126.6	24.6	189	185.5	36.1	249	244.4	47.5
10	09.8	01.9	70	68.7	13.4	130	127.6	24.8	190	186.5	36.3	250	245.4	47.7
11	10.8	02.1	71	69.7	13.5	131	128.6	25.0	191	187.5	36.4	251	246.4	47.9
12	11.8	02.3	72	70.7	13.7	132	129.6	25.2	192	188.5	36.6	252	247.4	48.1
13	12.8	02.5	73	71.7	13.9	133	130.6	25.4	193	189.5	36.8	253	248.4	48.3
14	13.7	02.7	74	72.6	14.1	134	131.5	25.6	194	190.4	37.0	254	249.3	48.5
15	14.7	02.9	75	73.6	14.3	135	132.5	25.8	195	191.4	37.2	255	250.3	48.7
16	15.7	03.1	76	74.6	14.5	136	133.5	26.0	196	192.4	37.4	256	251.3	48.8
17	16.7	03.2	77	75.6	14.7	137	134.5	26.1	197	193.4	37.6	257	252.3	49.0
18	17.7	03.4	78	76.6	14.9	138	135.5	26.3	198	194.4	37.8	258	253.3	49.2
19	18.7	03.6	79	77.5	15.1	139	136.4	26.5	199	195.3	38.0	259	254.2	49.4
20	19.6	03.8	80	78.5	15.3	140	137.4	26.7	200	196.3	38.2	260	255.2	49.6
21	20.6	04.0	81	79.5	15.5	141	138.4	26.9	201	197.3	38.4	261	256.2	49.8
22	21.6	04.2	82	80.5	15.6	142	139.4	27.1	202	198.3	38.5	262	257.2	50.0
23	22.6	04.4	83	81.5	15.8	143	140.4	27.3	203	199.3	38.7	263	258.2	50.2
24	23.6	04.6	84	82.5	16.0	144	141.4	27.5	204	200.3	38.9	264	259.1	50.4
25	24.5	04.8	85	83.4	16.2	145	142.3	27.7	205	201.2	39.1	265	260.1	50.6
26	25.5	05.0	86	84.4	16.4	146	143.3	27.9	206	202.2	39.3	266	261.1	50.8
27	26.5	05.2	87	85.4	16.6	147	144.3	28.0	207	203.2	39.5	267	262.1	50.9
28	27.5	05.3	88	86.4	16.8	148	145.3	28.2	208	204.2	39.7	268	263.1	51.1
29	28.5	05.5	89	87.4	17.0	149	146.3	28.4	209	205.2	39.9	269	264.1	51.3
30	29.4	05.7	90	88.3	17.2	150	147.2	28.6	210	206.1	40.1	270	265.0	51.5
31	30.4	05.9	91	89.3	17.4	151	148.2	28.8	211	207.1	40.3	271	266.0	51.7
32	31.4	06.1	92	90.3	17.6	152	149.2	29.0	212	208.1	40.5	272	267.0	51.9
33	32.4	06.3	93	91.3	17.7	153	150.2	29.2	213	209.1	40.6	273	268.0	52.1
34	33.4	06.5	94	92.3	17.9	154	151.2	29.4	214	210.1	40.8	274	269.0	52.3
35	34.4	06.7	95	93.3	18.1	155	152.2	29.6	215	211.0	41.0	275	269.9	52.5
36	35.3	06.9	96	94.2	18.3	156	153.1	29.8	216	212.0	41.2	276	270.9	52.7
37	36.3	07.1	97	95.2	18.5	157	154.1	30.0	217	213.0	41.4	277	271.9	52.9
38	37.3	07.3	98	96.2	18.7	158	155.1	30.1	218	214.0	41.6	278	272.9	53.0
39	38.3	07.4	99	97.2	18.9	159	156.1	30.3	219	215.0	41.8	279	273.9	53.2
40	39.3	07.6	100	98.2	19.1	160	157.1	30.5	220	216.0	42.0	280	274.9	53.4
41	40.2	07.8	101	99.1	19.3	161	158.0	30.7	221	216.9	42.2	281	275.8	53.6
42	41.2	08.0	102	100.1	19.5	162	159.0	30.9	222	217.9	42.4	282	276.8	53.8
43	42.2	08.2	103	101.1	19.7	163	160.0	31.1	223	218.9	42.6	283	277.8	54.0
44	43.2	08.4	104	102.1	19.8	164	161.0	31.3	224	219.9	42.7	284	278.8	54.2
45	44.2	08.6	105	103.1	20.0	165	162.0	31.5	225	220.9	42.9	285	279.8	54.4
46	45.2	08.8	106	104.1	20.2	166	163.0	31.7	226	221.8	43.1	286	280.7	54.6
47	46.1	09.0	107	105 0	20.4	167	163.9	31.9	227	222.8	43.3	287	281.7	54.8
48	47.1	09.2	108	106.0	20.6	168	164.9	32.1	228	223.8	43.5	288	282.7	55.0
49	48.1	09.3	109	107.0	20.8	169	165.9	32.2	229	224.8	43.7	289	283.7	55.1
50	49.1	09.5	110	108.0	21.0	170	166.9	32.4	230	225.8	43.9	290	284.7	55.3
51	50.1	09.7	111	109.0	21.2	171	167.9	32.6	231	226.8	44.1	291	285.7	55.5
52	51.0	09.9	112	109.9	21.4	172	168.8	32.8	232	227.7	44.3	292	286.6	55.7
53	52.0	10.1	113	110.9	21.6	173	169.8	33.0	233	228.7	44.5	293	287.6	55.9
54	53.0	10.3	114	111.9	21.8	174	170.8	33.2	234	229.7	44.6	294	288.6	56.1
55	54.0	10.5	115	112.9	21.9	175	171.8	33.4	235	230.7	44.8	295	289.6	56.3
56	55.0	10.7	116	113.9	22.1	176	172.8	33.6	236	231.7	45.0	296	290.6	56.5
57	56.0	10.9	117	114.9	22.3	177	173.7	33.8	237	232.6	45.2	297	291.5	56.7
58	56.9	11.1	118	115.8	22.5	178	174.7	34.0	238	233.6	45.4	298	292.5	56.9
59	57.9	11.3	119	116.8	22.7	179	175.7	34.2	239	234.6	45.6	299	293.5	57.1
60	58 9	11.4	120	117.8	22.9	180	176.7	34.3	240	235.6	45.8	300	294.5	57.2
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.2	61	59.7	12.7	121	118.4	25.2	181	177.0	37.6	241	235.7	50.1
2	02.0	00.4	62	60.6	12.9	122	119.3	25.4	182	178.0	37.8	242	236.7	50.3
3	02.9	00.6	63	61.6	13.1	123	120.3	25.6	183	179.0	38.0	243	237.7	50.5
4	03.9	00.8	64	62.6	13.3	124	121.3	25.8	184	180.0	38.3	244	238.7	50.7
5	04.9	01.0	65	63.6	13.5	125	122.3	26.0	185	181.0	38.5	245	239.6	50.9
6	05.9	01.2	66	64.6	13.7	126	123.2	26.2	186	181.9	38.7	246	240.6	51.1
7	06.8	01.5	67	65.5	13.9	127	124.2	26.4	187	182.9	38.9	247	241.6	51.4
8	07.8	01.7	68	66.5	14.1	128	125.2	26.6	188	183.9	39.1	248	242.6	51.6
9	08.8	01.9	69	67.5	14.3	129	126.2	26.8	189	184.9	39.3	249	243.6	51.8
10	09.8	02.1	70	68.5	14.6	130	127.2	27.0	190	185.8	39.5	250	244.5	52.0
11	10.8	02.3	71	69.4	14.8	131	128.1	27.2	191	186.8	39.7	251	245.5	52.2
12	11.7	02.5	72	70.4	15.0	132	129.1	27.4	192	187.8	39.9	252	246.5	52.4
13	12.7	02.7	73	71.4	15.2	133	130.1	27.7	193	188.8	40.1	253	247.5	52.6
14	13.7	02.9	74	72.4	15.4	134	131.1	27.9	194	189.8	40.3	254	248.4	52.8
15	14.7	03.1	75	73.4	15.6	135	132.0	28.1	195	190.7	40.5	255	249.4	53.0
16	15.7	03.3	76	74.3	15.8	136	133.0	28.3	196	191.7	40.8	256	250.4	53.2
17	16.6	03.5	77	75.3	16.0	137	134.0	28.5	197	192.7	41.0	257	251.4	53.4
18	17.6	03.7	78	76.3	16.2	138	135.0	28.7	198	193.7	41.2	258	252.4	53.6
19	18.6	04.0	79	77.3	16.4	139	136.0	28.9	199	194.7	41.4	259	253.3	53.8
20	19.6	04.2	80	78.3	16.6	140	136.9	29.1	200	195.6	41.6	260	254.3	54.1
21	20.5	04.4	81	79.2	16.8	141	137.9	29.3	201	196.6	41.8	261	255.3	54.3
22	21.5	04.6	82	80.2	17.0	142	138.9	29.5	202	197.6	42.0	262	256.3	54.5
23	22.5	04.8	83	81.2	17.3	143	139.9	29.7	203	198.6	42.2	263	257.3	54.7
24	23.5	05.0	84	82.2	17.5	144	140.9	29.9	204	199.5	42.4	264	258.2	54.9
25	24.5	05.2	85	83.1	17.7	145	141.8	30.1	205	200.5	42.6	265	259.2	55.1
26	25.4	05.4	86	84.1	17.9	146	142.8	30.4	206	201.5	42.8	266	260.2	55.3
27	26.4	05.6	87	85.1	18.1	147	143.8	30.6	207	202.5	43.0	267	261.2	55.5
28	27.4	05.8	88	86.1	18.3	148	144.8	30.8	208	203.5	43.2	268	262.1	55.7
29	28.4	06.0	89	87.1	18.5	149	145.7	31.0	209	204.4	43.5	269	263.1	55.9
30	29.3	06.2	90	88.0	18.7	150	146.7	31.2	210	205.4	43.7	270	264.1	56.1
31	30.3	06.4	91	89.0	18.9	151	147.7	31.4	211	206.4	43.9	271	265.1	56.3
32	31.3	06.7	92	90.0	19.1	152	148.7	31.6	212	207.4	44.1	272	266.1	56.6
33	32.3	06.9	93	91.0	19.3	153	149.7	31.8	213	208.3	44.3	273	267.0	56.8
34	33.3	07.1	94	91.9	19.5	154	150.6	32.0	214	209.3	44.5	274	268.0	57.0
35	34.2	07.3	95	92.9	19.8	155	151.6	32.2	215	210.3	44.7	275	269.0	57.2
36	35.2	07.5	96	93.9	20.0	156	152.6	32.4	216	211.3	44.9	276	270.0	57.4
37	36.2	07.7	97	94.9	20.2	157	153.6	32.6	217	212.3	45.1	277	270.9	57.6
38	37.2	07.9	98	95.9	20.4	158	154.5	32.9	218	213.2	45.3	278	271.9	57.8
39	38.1	08.1	99	96.8	20.6	159	155.5	33.1	219	214.2	45.5	279	272.9	58.0
40	39.1	08.3	100	97.8	20.8	160	156.5	33.3	220	215.2	45.7	280	273.9	58.2
41	40.1	08.5	101	98.8	21.0	161	157.5	33.5	221	216.2	45.9	281	274.9	58.4
42	41.1	08.7	102	99.8	21.2	162	158.5	33.7	222	217.1	46.2	282	275.8	58.6
43	42.1	08.9	103	100.7	21.4	163	159.4	33.9	223	218.1	46.4	283	276.8	58.8
44	43.0	09.1	104	101.7	21.6	164	160.4	34.1	224	219.1	46.6	284	277.8	59.0
45	44.0	09.4	105	102.7	21.8	165	161.4	34.3	225	220.1	46.8	285	278.8	59.3
46	45.0	09.6	106	103.7	22.0	166	162.4	34.5	226	221.1	47.0	286	279.8	59.5
47	46.0	09.8	107	104.7	22.2	167	163.4	34.7	227	222.0	47.2	287	280.7	59.7
48	47.0	10.0	108	105.6	22.5	168	164.3	34.9	228	223.0	47.4	288	281.7	59.9
49	47.9	10.2	109	106.6	22.7	169	165.3	35.1	229	224.0	47.6	289	282.7	60.1
50	48.9	10.4	110	107.6	22.9	170	166.3	35.3	230	225.0	47.8	290	283.7	60.3
51	49.9	10.6	111	108.6	23.1	171	167.3	35.6	231	226.0	48.0	291	284.6	60.5
52	50.9	10.8	112	109.6	23.3	172	168.2	35.8	232	226.9	48.2	292	285.6	60.7
53	51.8	11.0	113	110.5	23.5	173	169.2	36.0	233	227.9	48.4	293	286.6	60.9
54	52.8	11.2	114	111.5	23.7	174	170.2	36.2	234	228.9	48.7	294	287.6	61.1
55	53.8	11.4	115	112.5	23.9	175	171.2	36.4	235	229.9	48.9	295	288.6	61.3
56	54.8	11.6	116	113.5	24.1	176	172.2	36.6	236	230.8	49.1	296	289.5	61.5
57	55.8	11.9	117	114.4	24.3	177	173.1	36.8	237	231.8	49.3	297	290.5	61.7
58	56.7	12.1	118	115.4	24.5	178	174.1	37.0	238	232.8	49.5	298	291.5	62 0
59	57.7	12.3	119	116.4	24.7	179	175.1	37.2	239	233.8	49.7	299	292.5	62.2
60	58.7	12.5	120	117.4	24.9	180	176.1	37.4	240	234.8	49.9	300	293.4	62.4
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.2	61	59.4	13.7	121	117.9	27.2	181	176.4	40.7	241	234.8	54.2
2	01.9	00.4	62	60.4	13.9	122	118.9	27.4	182	177.3	40.9	242	235.8	54.4
3	02.9	00.7	63	61.4	14.2	123	119 8	27.7	183	178.3	41.2	243	236.8	54.7
4	03.9	00.9	64	62.4	14.4	124	120.8	27.9	184	179.3	41.4	244	237.7	54.9
5	04 9	01.1	65	63.3	14.6	125	121.8	28.1	185	180.3	41.6	245	238.7	55.1
6	05.8	01.3	66	64.3	14.8	126	122.8	28.3	186	181.2	41.8	246	239.7	55.3
7	06.8	01.6	67	65.3	15.1	127	123.7	28.6	187	182.2	42.1	247	240.7	55.6
8	07.8	01.8	68	66.3	15.3	128	124.7	28.8	188	183.2	42.3	248	241.6	55.8
9	08.8	02.0	69	67.2	15.5	129	125.7	29.0	189	184.2	42.5	249	242.6	56.0
10	**09.7**	**02.2**	**70**	**68.2**	**15.7**	**130**	**126.7**	**29.2**	**190**	**185.1**	**42.7**	**250**	**243.6**	**56.2**
11	10.7	02.5	71	69.2	16.0	131	127.6	29.5	191	186.1	43.0	251	244.6	56.5
12	11.7	02.7	72	70.2	16.2	132	128.6	29.7	192	187.1	43.2	252	245.5	56.7
13	12.7	02.9	73	71.1	16.4	133	129.6	29.9	193	188.1	43.4	253	246.5	56.9
14	13.6	03.1	74	72.1	16.6	134	130.6	30.1	194	189.0	43.6	254	247.5	57.1
15	14.6	03.4	75	73.1	16.9	135	131.5	30.4	195	190.0	43.9	255	248.5	57.4
16	15.6	03.6	76	74.1	17.1	136	132.5	30.6	196	191.0	44.1	256	249.4	57.6
17	16.6	03.8	77	75.0	17.3	137	133.5	30.8	197	192.0	44.3	257	250.4	57.8
18	17.5	04.0	78	76.0	17.5	138	134.5	31.0	198	192.9	44.5	258	251.4	58.0
19	18.5	04.3	79	77 0	17.8	139	135.4	31.3	199	193.9	44.8	259	252.4	58.3
20	**19.5**	**04.5**	**80**	**77.9**	**18.0**	**140**	**136.4**	**31.5**	**200**	**194.9**	**45.0**	**260**	**253.3**	**58.5**
21	20.5	04.7	81	78.9	18.2	141	137.4	31.7	201	195.8	45.2	261	254.3	58.7
22	21.4	04.9	82	79.9	18.4	142	138.4	31.9	202	196.8	45.4	262	255.3	58.9
23	22.4	05.2	83	80.9	18.7	143	139.3	32.2	203	197.8	45.7	263	256.3	59.2
24	23.4	05.4	84	81.8	18.9	144	140.3	32.4	204	198.8	45.9	264	257.2	59.4
25	24.4	05.6	85	82.8	19.1	145	141.3	32.6	205	199.7	46.1	265	258.2	59.6
26	25.3	05.8	86	83.8	19.3	146	142.3	32.8	206	200.7	46.3	266	259.2	59.8
27	26.3	06.1	87	84.8	19.6	147	143.2	33.1	207	201.7	46.6	267	260.2	60.1
28	27.3	06.3	88	85.7	19.8	148	144.2	33.3	208	202.7	46.8	268	261.1	60.3
29	28.3	06.5	89	86.7	20.0	149	145.2	33.5	209	203.6	47.0	269	262.1	60.5
30	**29.2**	**06.7**	**90**	**87.7**	**20.2**	**150**	**146.2**	**33.7**	**210**	**204.6**	**47.2**	**270**	**263.1**	**60.7**
31	30.2	07.0	91	88.7	20.5	151	147.1	34.0	211	205.6	47.5	271	264.1	61.0
32	31.2	07.2	92	89.6	20.7	152	148.1	34.2	212	206.6	47.7	272	265.0	61.2
33	32.2	07.4	93	90.6	20.9	153	149.1	34.4	213	207.5	47.9	273	266.0	61.4
34	33.1	07.6	94	91.6	21.1	154	150.1	34.6	214	208.5	48.1	274	267.0	61.6
35	34.1	07.9	95	92.6	21.4	155	151.0	34.9	215	209.5	48.4	275	268.0	61.9
36	35.1	08.1	96	93.5	21.6	156	152.0	35.1	216	210.5	48.6	276	268.9	62.1
37	36.1	08.3	97	94.5	21.8	157	153.0	35.3	217	211.4	48.8	277	269.9	62.3
38	37.0	08.5	98	95.5	22.0	158	154.0	35.5	218	212.4	49.0	278	270.9	62.5
39	38.0	08 8	99	96.5	22.3	159	154.9	35.8	219	213.4	49.3	279	271.8	62.8
40	**39.0**	**09.0**	**100**	**97.4**	**22.5**	**160**	**155.9**	**36.0**	**220**	**214.4**	**49.5**	**280**	**272.8**	**63.0**
41	39.9	09.2	101	98.4	22.7	161	156.9	36.2	221	215.3	49.7	281	273.8	63.2
42	40.9	09.4	102	99.4	22.9	162	157.8	36.4	222	216.3	49.9	282	274.8	63.4
43	41.9	09.7	103	100.4	23.2	163	158.8	36.7	223	217.3	50.2	283	275.7	63.7
44	42.9	09.9	104	101.3	23.4	164	159.8	36.9	224	218.3	50.4	284	276.7	63.9
45	43.8	10.1	105	102.3	23.6	165	160.8	37.1	225	219.2	50.6	285	277.7	64.1
46	44.8	10.3	106	103.3	23.8	166	161.7	37.3	226	220.2	50.8	286	278.7	64.3
47	45.8	10.6	107	104.3	24.1	167	162.7	37.6	227	221.2	51.1	287	279.6	64.6
48	46.8	10.8	108	105.2	24.3	168	163.7	37.8	228	222.2	51.3	288	280.6	64.8
49	47.7	11.0	109	106.2	24.5	169	164.7	38.0	229	223.1	51.5	289	281.6	65.0
50	**48.7**	**11.2**	**110**	**107.2**	**24.7**	**170**	**165.6**	**38.2**	**230**	**224.1**	**51.7**	**290**	**282.6**	**65.2**
51	49.7	11.5	111	108.2	25.0	171	166.6	38.5	231	225.1	52.0	291	283.5	65.5
52	50.7	11.7	112	109.1	25.2	172	167.6	38.7	232	226.1	52.2	292	284.5	65.7
53	51.6	11.9	113	110.1	25.4	173	168.6	38.9	233	227.0	52.4	293	285.5	65.9
54	52.6	12.1	114	111.1	25.6	174	169.5	39.1	234	228.0	52.6	294	286.5	66.1
55	53.6	12.4	115	112.1	25.9	175	170.5	39.4	235	229.0	52.9	295	287.4	66.4
56	54.6	12.6	116	113.0	26.1	176	171.5	39.6	236	230.0	53.1	296	288.4	66.6
57	55.5	12.8	117	114.0	26.3	177	172.5	39.8	237	230.9	53.3	297	289.4	66.8
58	56.5	13.0	118	115.0	26.5	178	173.4	40.0	238	231.9	53.5	298	290.4	67.0
59	57.5	13.3	119	116.0	26.8	179	174.4	40.3	239	232.9	53.8	299	291.3	67.3
60	58.5	13.5	120	116.9	27.0	180	175.4	40.5	240	233.8	54.0	300	292.3	67.5
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.2	61	59.2	14.8	121	117.4	29.3	181	175.6	43.8	241	233.8	58.3
2	01.9	00.5	62	60.2	15.0	122	118.4	29.5	182	176.6	44.0	242	234.8	58.5
3	02.9	00.7	63	61.1	15.2	123	119.3	29.8	183	177.6	44.3	243	235.8	58.8
4	03.9	01.0	64	62.1	15.5	124	120.3	30.0	184	178.5	44.5	244	236.8	59.0
5	04.9	01.2	65	63.1	15.7	125	121.3	30.2	185	179.5	44.8	245	237.7	59.3
6	05.8	01.5	66	64.0	16.0	126	122.3	30.5	186	180.5	45.0	246	238.7	59.5
7	06.8	01.7	67	65.0	16.2	127	123.2	30.7	187	181.4	45.2	247	239.7	59.8
8	07.8	01.9	68	66.0	16.5	128	124.2	31.0	188	182.4	45.5	248	240.6	60.0
9	08.7	02.2	69	67.0	16.7	129	125.2	31.2	189	183.4	45.7	249	241.6	60.2
10	09.7	02.4	70	67.9	16.9	130	126.1	31.4	190	184.4	46.0	250	242.6	60.5
11	10.7	02.7	71	68.9	17.2	131	127.1	31.7	191	185.3	46.2	251	243.5	60.7
12	11.6	02.9	72	69.9	17.4	132	128.1	31.9	192	186.3	46.4	252	244.5	61.0
13	12.6	03.1	73	70.8	17.7	133	129.0	32.2	193	187.3	46.7	253	245.5	61.2
14	13.6	03.4	74	71.8	17.9	134	130.0	32.4	194	188.2	46.9	254	246.5	61.4
15	14.6	03.6	75	72.8	18.1	135	131.0	32.7	195	189.2	47.2	255	247.4	61.7
16	15.5	03.9	76	73.7	18.4	136	132.0	32.9	196	190.2	47.4	256	248.4	61.9
17	16.5	04.1	77	74.7	18.6	137	132.9	33.1	197	191.1	47.7	257	249.4	62.2
18	17.5	04.4	78	75.7	18.9	138	133.9	33.4	198	192.1	47.9	258	250.3	62.4
19	18.4	04.6	79	76.7	19.1	139	134.9	33.6	199	193.1	48.1	259	251.3	62.7
20	19.4	04.8	80	77.6	19.4	140	135.8	33.9	200	194.1	48.4	260	252.3	62.9
21	20.4	05.1	81	78.6	19.6	141	136.8	34.1	201	195.0	48.6	261	253.2	63.1
22	21.3	05.3	82	79.6	19.8	142	137.8	34.4	202	196.0	48.9	262	254.2	63.4
23	22.3	05.6	83	80.5	20.1	143	138.8	34.6	203	197.0	49.1	263	255.2	63.6
24	23.3	05.8	84	81.5	20.3	144	139.7	34.8	204	197.9	49.4	264	256.2	63.9
25	24.3	06.0	85	82.5	20.6	145	140.7	35.1	205	198.9	49.6	265	257.1	64.1
26	25.2	06.3	86	83.4	20.8	146	141.7	35.3	206	199.9	49.8	266	258.1	64.4
27	26.2	06.5	87	84.4	21.0	147	142.6	35.6	207	200.9	50.1	267	259.1	64.6
28	27.2	06.8	88	85.4	21.3	148	143.6	35.8	208	201.8	50.3	268	260.0	64.8
29	28.1	07.0	89	86.4	21.5	149	144.6	36.0	209	202.8	50.6	269	261.0	65.1
30	29.1	07.3	90	87.3	21.8	150	145.5	36.3	210	203.8	50.8	270	262.0	65.3
31	30.1	07.5	91	88.3	22.0	151	146.5	36.5	211	204.7	51.0	271	263.0	65.6
32	31.0	07.7	92	89.3	22.3	152	147.5	36.8	212	205.7	51.3	272	263.9	65.8
33	32.0	08.0	93	90.2	22.5	153	148.5	37.0	213	206.7	51.5	273	264.9	66.0
34	33.0	08.2	94	91.2	22.7	154	149.4	37.3	214	207.6	51.8	274	265.9	66.3
35	34.0	08.5	95	92.2	23.0	155	150.4	37.5	215	208.6	52.0	275	266.8	66.5
36	34.9	08.7	96	93.1	23.2	156	151.4	37.7	216	209.6	52.3	276	267.8	66.8
37	35.9	09.0	97	94.1	23.5	157	152.3	38.0	217	210.6	52.5	277	268.8	67.0
38	36.9	09.2	98	95.1	23.7	158	153.3	38.2	218	211.5	52.7	278	269.7	67.3
39	37.8	09.4	99	96.1	24.0	159	154.3	38.5	219	212.5	53.0	279	270.7	67.5
40	38.8	09.7	100	97.0	24.2	160	155.2	38.7	220	213.5	53.2	280	271.7	67.7
41	39.8	09.9	101	98.0	24.4	161	156.2	38.9	221	214.4	53.5	281	272.7	68.0
42	40.8	10.2	102	99.0	24.7	162	157.2	39.2	222	215.4	53.7	282	273.6	68.2
43	41.7	10.4	103	99.9	24.9	163	158.2	39.4	223	216.4	53.9	283	274.6	68.5
44	42.7	10.6	104	100.9	25.2	164	159.1	39.7	224	217.3	54.2	284	275.6	68.7
45	43.7	10.9	105	101.9	25.4	165	160.1	39.9	225	218.3	54.4	285	276.5	68.9
46	44.6	11.1	106	102.9	25.6	166	161.1	40.2	226	219.3	54.7	286	277.5	69.2
47	45.6	11.4	107	103.8	25.9	167	162.0	40.4	227	220.3	54.9	287	278.5	69.4
48	46.6	11.6	108	104.8	26.1	168	163.0	40.6	228	221.2	55.2	288	279.4	69.7
49	47.5	11.9	109	105.8	26.4	169	164.0	40.9	229	222.2	55.4	289	280.4	69.9
50	48.5	12.1	110	106.7	26.6	170	165.0	41.1	230	223.2	55.6	290	281.4	70.2
51	49.5	12.3	111	107.7	26.9	171	165.9	41.4	231	224.1	55.9	291	282.4	70.4
52	50.5	12.6	112	108.7	27.1	172	166.9	41.6	232	225.1	56.1	292	283.3	70.6
53	51.4	12.8	113	109.6	27.3	173	167.9	41.9	233	226.1	56.4	293	284.3	70.9
54	52.4	13.1	114	110.6	27.6	174	168.8	42.1	234	227.0	56.6	294	285.3	71.1
55	53.4	13.3	115	111.6	27.8	175	169.8	42.3	235	228.0	56.9	295	286.2	71.4
56	54.3	13.5	116	112.6	28.1	176	170.8	42.6	236	229.0	57.1	296	287.2	71.6
57	55.3	13.8	117	113.5	28.3	177	171.7	42.8	237	230.0	57.3	297	288.2	71.9
58	56.3	14.0	118	114.5	28.6	178	172.7	43.1	238	230.9	57.6	298	289.1	72.1
59	57.2	14.3	119	115.5	28.8	179	173.7	43.3	239	231.9	57.8	299	290.1	72.3
60	58.2	14.5	120	116.4	29.0	180	174.7	43.5	240	232.9	58.1	300	291.1	72.6
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.3	61	58.9	15.8	121	116.9	31.3	181	174.8	46.8	241	232.8	62.4
2	01.9	00.5	62	59.9	16.0	122	117.8	31.6	182	175.8	47.1	242	233.8	62.6
3	02.9	00.8	63	60.9	16.3	123	118.8	31.8	183	176.8	47.4	243	234.7	62.9
4	03.9	01.0	64	61.8	16.6	124	119.8	32.1	184	177.7	47.6	244	235.7	63.2
5	04.8	01.3	65	62.8	16.8	125	120.7	32.4	185	178.7	47.9	245	236.7	63.4
6	05.8	01.6	66	63.8	17.1	126	121.7	32.6	186	179.7	48.1	246	237.6	63.7
7	06.8	01.8	67	64.7	17.3	127	122.7	32.9	187	180.6	48.4	247	238.6	63.9
8	07.7	02.1	68	65.7	17.6	128	123.6	33.1	188	181.6	48.7	248	239.5	64.2
9	08.7	02.3	69	66.6	17.9	129	124.6	33.4	189	182.6	48.9	249	240.5	64.4
10	09.7	02.6	70	67.6	18.1	130	125.6	33.6	190	183.5	49.2	250	241.5	64.7
11	10.6	02.8	71	68.6	18.4	131	126.5	33.9	191	184.5	49.4	251	242.4	65.0
12	11.6	03.1	72	69.5	18.6	132	127.5	34.2	192	185.5	49.7	252	243.4	65.2
13	12.6	03.4	73	70.5	18.9	133	128.5	34.4	193	186.4	50.0	253	244.4	65.5
14	13.5	03.6	74	71.5	19.2	134	129.4	34.7	194	187.4	50.2	254	245.3	65.7
15	14.5	03.9	75	72.4	19.4	135	130.4	34.9	195	188.4	50.5	255	246.3	66.0
16	15.5	04.1	76	73.4	19.7	136	131.4	35.2	196	189.3	50.7	256	247.3	66.3
17	16.4	04.4	77	74.4	19.9	137	132.3	35.5	197	190.3	51.0	257	248.2	66.5
18	17.4	04.7	78	75.3	20.2	138	133.3	35.7	198	191.3	51.2	258	249.2	66.8
19	18.4	04.9	79	76.3	20.4	139	134.3	36.0	199	192.2	51.5	259	250.2	67.0
20	19.3	05.2	80	77.3	20.7	140	135.2	36.2	200	193.2	51.8	260	251.1	67.3
21	20.3	05.4	81	78.2	21.0	141	136.2	36.5	201	194.2	52.0	261	252.1	67.6
22	21.3	05.7	82	79.2	21.2	142	137.2	36.8	202	195.1	52.3	262	253.1	67.8
23	22.2	06.0	83	80.2	21.5	143	138.1	37.0	203	196.1	52.5	263	254.0	68.1
24	23.2	06.2	84	81.1	21.7	144	139.1	37.3	204	197.0	52.8	264	255.0	68.3
25	24.1	06.5	85	82.1	22.0	145	140.1	37.5	205	198.0	53.1	265	256.0	68.6
26	25.1	06.7	86	83.1	22.3	146	141.0	37.8	206	199.0	53.3	266	256.9	68.8
27	26.1	07.0	87	84.0	22.5	147	142.0	38.0	207	199.9	53.6	267	257.9	69.1
28	27.0	07.2	88	85.0	22.8	148	143.0	38.3	208	200.9	53.8	268	258.9	69.4
29	28.0	07.5	89	86.0	23.0	149	143.9	38.6	209	201.9	54.1	269	259.8	69.6
30	29.0	07.8	90	86.9	23.3	150	144.9	38.8	210	202.8	54.4	270	260.8	69.9
31	29.9	08.0	91	87.9	23.6	151	145.9	39.1	211	203.8	54.6	271	261.8	70.1
32	30.9	08.3	92	88.9	23.8	152	146.8	39.3	212	204.8	54.9	272	262.7	70.4
33	31.9	08.5	93	89.8	24.1	153	147.8	39.6	213	205.7	55.1	273	263.7	70.7
34	32.8	08.8	94	90.8	24.3	154	148.8	39.9	214	206.7	55.4	274	264.7	70.9
35	33.8	09.1	95	91.8	24.6	155	149.7	40.1	215	207.7	55.6	275	265.6	71.2
36	34.8	09.3	96	92.7	24.8	156	150.7	40.4	216	208.6	55.9	276	266.6	71.4
37	35.7	09.6	97	93.7	25.1	157	151.7	40.6	217	209.6	56.2	277	267.6	71.7
38	36.7	09.8	98	94.7	25.4	158	152.6	40.9	218	210.6	56.4	278	268.5	72.0
39	37.7	10.1	99	95.6	25.6	159	153.6	41.2	219	211.5	56.7	279	269.5	72.2
40	38.6	10.4	100	96.6	25.9	160	154.5	41.4	220	212.5	56.9	280	270.5	72.5
41	39.6	10.6	101	97.6	26.1	161	155.5	41.7	221	213.5	57.2	281	271.4	72.7
42	40.6	10.9	102	98.5	26.4	162	156.5	41.9	222	214.4	57.5	282	272.4	73.0
43	41.5	11.1	103	99.5	26.7	163	157.4	42.2	223	215.4	57.7	283	273.4	73.2
44	42.5	11.4	104	100.5	26.9	164	158.4	42.4	224	216.4	58.0	284	274.3	73.5
45	43.5	11.6	105	101.4	27.2	165	159.4	42.7	225	217.3	58.2	285	275.3	73.8
46	44.4	11.9	106	102.4	27.4	166	160.3	43.0	226	218.3	58.5	286	276.3	74.0
47	45.4	12.2	107	103.4	27.7	167	161.3	43.2	227	219.3	58.8	287	277.2	74.3
48	46.4	12.4	108	104.3	28.0	168	162.3	43.5	228	220.2	59.0	288	278.2	74.5
49	47.3	12.7	109	105.3	28.2	169	163.2	43.7	229	221.2	59.3	289	279.2	74.8
50	48.3	12.9	110	106.3	28.5	170	164.2	44.0	230	222.2	59.5	290	280.1	75.1
51	49.3	13.2	111	107.2	28.7	171	165.2	44.3	231	223.1	59.8	291	281.1	75.3
52	50.2	13.5	112	108.2	29.0	172	166.1	44.5	232	224.1	60.0	292	282.1	75.6
53	51.2	13.7	113	109.1	29.2	173	167.1	44.8	233	225.1	60.3	293	283.0	75.8
54	52.2	14.0	114	110.1	29.5	174	168.1	45.0	234	226.0	60.6	294	284.0	76.1
55	53.1	14.2	115	111.1	29.8	175	169.0	45.3	235	227.0	60.8	295	284.9	76.4
56	54.1	14.5	116	112.0	30.0	176	170.0	45.6	236	228.0	61.1	296	285.9	76.6
57	55.1	14.8	117	113.0	30.3	177	171.0	45.8	237	228.9	61.3	297	286.9	76.9
58	56.0	15.0	118	114.0	30.5	178	171.9	46.1	238	229.9	61.6	298	287.8	77.1
59	57.0	15.3	119	114.9	30.8	179	172.9	46.3	239	230.9	61.9	299	288.8	77.4
60	58.0	15.5	120	115.9	31.1	180	173.9	46.6	240	231.8	62.1	300	289.8	77.6
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.3	61	58.6	16.8	121	116.3	33.4	181	174.0	49.9	241	231.7	66.4
2	01.9	00.6	62	59.6	17.1	122	117.3	33.6	182	174.9	50.2	242	232.6	66.7
3	02.9	00.8	63	60.6	17.4	123	118.2	33.9	183	175.9	50.4	243	233.6	67.0
4	03.8	01.1	64	61.5	17.6	124	119.2	34.2	184	176.9	50.7	244	234.5	67.3
5	04.8	01.4	65	62.5	17.9	125	120.2	34.5	185	177.8	51.0	245	235.5	67.5
6	05.8	01.7	66	63.4	18.2	126	121.1	34.7	186	178.8	51.3	246	236.5	67.8
7	06.7	01.9	67	64.4	18.5	127	122.1	35.0	187	179.8	51.5	247	237.4	68.1
8	07.7	02.2	68	65.4	18.7	128	123.0	35.3	188	180.7	51.8	248	238.4	68.4
9	08.7	02.5	69	66.3	19.0	129	124.0	35.6	189	181.7	52.1	249	239.4	68.6
10	09.6	02.8	70	67.3	19.3	130	125.0	35.8	190	182.6	52.4	250	240.3	68.9
11	10.6	03.0	71	68.2	19.6	131	125.9	36.1	191	183.6	52.6	251	241.3	69.2
12	11.5	03.3	72	69.2	19.8	132	126.9	36.4	192	184.6	52.9	252	242.2	69.5
13	12.5	03.6	73	70.2	20.1	133	127.8	36.7	193	185.5	53.2	253	243.2	69.7
14	13.5	03.9	74	71.1	20.4	134	128.8	36.9	194	186.5	53.5	254	244.2	70.0
15	14.4	04.1	75	72.1	20.7	135	129.8	37.2	195	187.4	53.7	255	245.1	70.3
16	15.4	04.4	76	73.1	20.9	136	130.7	37.5	196	188.4	54.0	256	246.1	70.6
17	16.3	04.7	77	74.0	21.2	137	131.7	37.8	197	189.4	54.3	257	247.0	70.8
18	17.3	05.0	78	75.0	21.5	138	132.7	38.0	198	190.3	54.6	258	248.0	71.1
19	18.3	05.2	79	75.9	21.8	139	133.6	38.3	199	191.3	54.9	259	249.0	71.4
20	19.2	05.5	80	76.9	22.1	140	134.6	38.6	200	192.3	55.1	260	249.9	71.7
21	20.2	05.8	81	77.9	22.3	141	135.5	38.9	201	193.2	55.4	261	250.9	71.9
22	21.1	06.1	82	78.8	22.6	142	136.5	39.1	202	194.2	55.7	262	251.9	72.2
23	22.1	06.3	83	79.8	22.9	143	137.5	39.4	203	195.1	56.0	263	252.8	72.5
24	23.1	06.6	84	80.7	23.2	144	138.4	39.7	204	196.1	56.2	264	253.8	72.8
25	24.0	06.9	85	81.7	23.4	145	139.4	40.0	205	197.1	56.5	265	254.7	73.0
26	25.0	07.2	86	82.7	23.7	146	140.3	40.2	206	198.0	56.8	266	255.7	73.3
27	26.0	07.4	87	83.6	24.0	147	141.3	40.5	207	199.0	57.1	267	256.7	73.6
28	26.9	07.7	88	84.6	24.3	148	142.3	40.8	208	199.9	57.3	268	257.6	73.9
29	27.9	08.0	89	85.6	24.5	149	143.2	41.1	209	200.9	57.6	269	258.6	74.1
30	28.8	08.3	90	86.5	24.8	150	144.2	41.3	210	201.9	57.9	270	259.5	74.4
31	29.8	08.5	91	87.5	25.1	151	145.2	41.6	211	202.8	58.2	271	260.5	74.7
32	30.8	08.8	92	88.4	25.4	152	146.1	41.9	212	203.8	58.4	272	261.5	75.0
33	31.7	09.1	93	89.4	25.6	153	147.1	42.2	213	204.7	58.7	273	262.4	75.2
34	32.7	09.4	94	90.4	25.9	154	148.0	42.4	214	205.7	59.0	274	263.4	75.5
35	33.6	09.6	95	91.3	26.2	155	149.0	42.7	215	206.7	59.3	275	264.3	75.8
36	34.6	09.9	96	92.3	26.5	156	150.0	43.0	216	207.6	59.5	276	265.3	76.1
37	35.6	10.2	97	93.2	26.7	157	150.9	43.3	217	208.6	59.8	277	266.3	76.4
38	36.5	10.5	98	94.2	27.0	158	151.9	43.6	218	209.6	60.1	278	267.2	76.6
39	37.5	10.7	99	95.2	27.3	159	152.8	43.8	219	210.5	60.4	279	268.2	76.9
40	38.5	11.0	100	96.1	27.6	160	153.8	44.1	220	211.5	60.6	280	269.2	77.2
41	39.4	11.3	101	97.1	27.8	161	154.8	44.4	221	212.4	60.9	281	270.1	77.5
42	40.4	11.6	102	98.0	28.1	162	155.7	44.7	222	213.4	61.2	282	271.1	77.7
43	41.3	11.9	103	99.0	28.4	163	156.7	44.9	223	214.4	61.5	283	272.0	78.0
44	42.3	12.1	104	100.0	28.7	164	157.6	45.2	224	215.3	61.7	284	273.0	78.3
45	43.3	12.4	105	100.9	28.9	165	158.6	45.5	225	216.3	62.0	285	274.0	78.6
46	44.2	12.7	106	101.9	29.2	166	159.6	45.8	226	217.2	62.3	286	274.9	78.8
47	45.2	13.0	107	102.9	29.5	167	160.5	46.0	227	218.2	62.6	287	275.9	79.1
48	46.1	13.2	108	103.8	29.8	168	161.5	46.3	228	219.2	62.8	288	276.8	79.4
49	47.1	13.5	109	104.8	30.0	169	162.5	46.6	229	220.1	63.1	289	277.8	79.7
50	48.1	13.8	110	105.7	30.3	170	163.4	46.9	230	221.1	63.4	290	278.8	79.9
51	49.0	14.1	111	106.7	30.6	171	164.4	47.1	231	222.1	63.7	291	279.7	80.2
52	50.0	14.3	112	107.7	30.9	172	165.3	47.4	232	223.0	63.9	292	280.7	80.5
53	50.9	14.6	113	108.6	31.1	173	166.3	47.7	233	224.0	64.2	293	281.6	80.8
54	51.9	14.9	114	109.6	31.4	174	167.3	48.0	234	224.9	64.5	294	282.6	81.0
55	52.9	15.2	115	110.5	31.7	175	168.2	48.2	235	225.9	64.8	295	283.6	81.3
56	53.8	15.4	116	111.5	32.0	176	169.2	48.5	236	226.9	65.1	296	284.5	81.6
57	54.8	15.7	117	112.5	32.2	177	170.1	48.8	237	227.8	65.3	297	285.5	81.9
58	55.8	16.0	118	113.4	32.5	178	171.1	49.1	238	228.8	65.6	298	286.5	82.1
59	56.7	16.3	119	114.4	32.8	179	172.1	49.3	239	229.7	65.9	299	287.4	82.4
60	57.7	16.5	120	115.4	33.1	180	173.0	49 6	240	230.7	66.2	300	288.4	82.7
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Difference of Latitude and Departure for 74°.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.3	61	58.3	17.8	121	115.7	35.4	181	173.1	52.9	241	230.5	70.5
2	01.9	00.6	62	59.3	18.1	122	116.7	35.7	182	174.0	53.2	242	231.4	70.8
3	02.9	00.9	63	60.2	18.4	123	117.6	36.0	183	175.0	53.5	243	232.4	71.0
4	03.8	01.2	64	61.2	18.7	124	118.6	36.3	184	176.0	53.8	244	233.3	71.3
5	04.8	01.5	65	62.2	19.0	125	119.5	36.5	185	176.9	54.1	245	234.3	71.6
6	05.7	01.8	66	63.1	19.3	126	120.5	36.8	186	177.9	54.4	246	235.3	71.9
7	06.7	02.0	67	64.1	19.6	127	121.5	37.1	187	178.8	54.7	247	236.2	72.2
8	07.7	02.3	68	65.0	19.9	128	122.4	37.4	188	179.8	55.0	248	237.2	72.5
9	08.6	02.6	69	66.0	20.2	129	123.4	37.7	189	180.7	55.3	249	238.1	72.8
10	**09.6**	**02.9**	**70**	**66.9**	**20.5**	**130**	**124.3**	**38.0**	**190**	**181.7**	**55.6**	**250**	**239.1**	**73.1**
11	10.5	03.2	71	67.9	20.8	131	125.3	38.3	191	182.7	55.8	251	240.0	73.4
12	11.5	03.5	72	68.9	21.1	132	126.2	38.6	192	183.6	56.1	252	241.0	73.7
13	12.4	03.8	73	69.8	21.3	133	127.2	38.9	193	184.6	56.4	253	241.9	74.0
14	13.4	04.1	74	70.8	21.6	134	128.1	39.2	194	185.5	56.7	254	242.9	74.3
15	14.3	04.4	75	71.7	21.9	135	129.1	39.5	195	186.5	57.0	255	243.9	74.6
16	15.3	04.7	76	72.7	22.2	136	130.1	39.8	196	187.4	57.3	256	244.8	74.8
17	16.3	05.0	77	73.6	22.5	137	131.0	40.1	197	188.4	57.6	257	245.8	75.1
18	17.2	05.3	78	74.6	22.8	138	132.0	40.3	198	189.3	57.9	258	246.7	75.4
19	18.2	05.6	79	75.5	23.1	139	132.9	40.6	199	190.3	58.2	259	247.7	75.7
20	**19.1**	**05.8**	**80**	**76.5**	**23.4**	**140**	**133.9**	**40.9**	**200**	**191.3**	**58.5**	**260**	**248.6**	**76.0**
21	20.1	06.1	81	77.5	23.7	141	134.8	41.2	201	192.2	58.8	261	249.6	76.3
22	21.0	06.4	82	78.4	24.0	142	135.8	41.5	202	193.2	59.1	262	250.6	76.6
23	22.0	06.7	83	79.4	24.3	143	136.8	41.8	203	194.1	59.4	263	251.5	76.9
24	23.0	07.0	84	80.3	24.6	144	137.7	42.1	204	195.1	59.6	264	252.5	77.2
25	23.9	07.3	85	81.3	24.9	145	138.7	42.4	205	196.0	59.9	265	253.4	77.5
26	24.9	07.6	86	82.2	25.1	146	139.6	42.7	206	197.0	60.2	266	254.4	77.8
27	25.8	07.9	87	83.2	25.4	147	140.6	43.0	207	198.0	60.5	267	255.3	78.1
28	26.8	08.2	88	84.2	25.7	148	141.5	43.3	208	198.9	60.8	268	256.3	78.4
29	27.7	08.5	89	85.1	26.0	149	142.5	43.6	209	199.9	61.1	269	257.2	78.6
30	**28.7**	**08.8**	**90**	**86.1**	**26.3**	**150**	**143.4**	**43.9**	**210**	**200.8**	**61.4**	**270**	**258.2**	**78.9**
31	29.6	09.1	91	87.0	26.6	151	144.4	44.1	211	201.8	61.7	271	259.2	79.2
32	30.6	09.4	92	88.0	26.9	152	145.4	44.4	212	202.7	62.0	272	260.1	79.5
33	31.6	09.6	93	88.9	27.2	153	146.3	44.7	213	203.7	62.3	273	261.1	79.8
34	32.5	09.9	94	89.9	27.5	154	147.3	45.0	214	204.6	62.6	274	262.0	80.1
35	33.5	10.2	95	90.8	27.8	155	148.2	45.3	215	205.6	62.9	275	263.0	80.4
36	34.4	10.5	96	91.8	28.1	156	149.2	45.6	216	206.6	63.2	276	263.9	80.7
37	35.4	10.8	97	92.8	28.4	157	150.1	45.9	217	207.5	63.4	277	264.9	81.0
38	36.3	11.1	98	93.7	28.7	158	151.1	46.2	218	208.5	63.7	278	265.9	81.3
39	37.3	11.4	99	94.7	28.9	159	152.1	46.5	219	209.4	64.0	279	266.8	81.6
40	**38.3**	**11.7**	**100**	**95.6**	**29.2**	**160**	**153.0**	**46.8**	**220**	**210.4**	**64.3**	**280**	**267.8**	**81.9**
41	39.2	12.0	101	96.6	29.5	161	154.0	47.1	221	211.3	64.6	281	268.7	82.2
42	40.2	12.3	102	97.5	29.8	162	154.9	47.4	222	212.3	64.9	282	269.7	82.4
43	41.1	12.6	103	98.5	30.1	163	155.9	47.7	223	213.3	65.2	283	270.6	82.7
44	42.1	12.9	104	99.5	30.4	164	156.8	47.9	224	214.2	65.5	284	271.6	83.0
45	43.0	13.2	105	100.4	30.7	165	157.8	48.2	225	215.2	65.8	285	272.5	83.3
46	44.0	13.4	106	101.4	31.0	166	158.7	48.5	226	216.1	66.1	286	273.5	83.6
47	44.9	13.7	107	102.3	31.3	167	159.7	48.8	227	217.1	66.4	287	274.5	83.9
48	45.9	14.0	108	103.3	31.6	168	160.7	49.1	228	218.0	66.7	288	275.4	84.2
49	46.9	14.3	109	104.2	31.9	169	161.6	49.4	229	219.0	67.0	289	276.4	84.5
50	**47.8**	**14.6**	**110**	**105.2**	**32.2**	**170**	**162.6**	**49.7**	**230**	**220.0**	**67.2**	**290**	**277.3**	**84.8**
51	48.8	14.9	111	106.1	32.5	171	163.5	50.0	231	220.9	67.5	291	278.3	85.1
52	49.7	15.2	112	107.1	32.7	172	164.5	50.3	232	221.9	67.8	292	279.2	85.4
53	50.7	15.5	113	108.1	33.0	173	165.4	50.6	233	222.8	68.1	293	280.2	85.7
54	51.6	15.8	114	109.0	33.3	174	166.4	50.9	234	223.8	68.4	294	281.2	86.0
55	52.6	16.1	115	110.0	33.6	175	167.4	51.2	235	224.7	68.7	295	282.1	86.2
56	53.6	16.4	116	110.9	33.9	176	168.3	51.5	236	225.7	69.0	296	283.1	86.5
57	54.5	16.7	117	111.9	34.2	177	169.3	51.7	237	226.6	69.3	297	284.0	86.8
58	55.5	17.0	118	112.8	34.5	178	170.2	52.0	238	227.6	69.6	298	285 0	87.1
59	56.4	17.2	119	113.8	34.8	179	171.2	52.3	239	228.6	69.9	299	285.9	87.4
60	*57.4*	*17.5*	*120*	114.8	35.1	180	172.1	52.6	240	229.5	70.2	300	286.9	87.7
Dist.	*Dep.*	*Lat.*	*Dist.*	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	01.0	00.3	61	58.0	18.9	121	115.1	37.4	181	172.1	55.9	241	229.2	74.5
2	01.9	00.6	62	59.0	19.2	122	116.0	37.7	182	173.1	56.2	242	230.2	74.8
3	02.9	00.9	63	59.9	19.5	123	117.0	38.0	183	174.0	56.6	243	231.1	75.1
4	03.8	01.2	64	60.9	19.8	124	117.9	38.3	184	175.0	56.9	244	232.1	75.4
5	04.8	01.5	65	61.8	20.1	125	118.9	38.6	185	175.9	57.2	245	233.0	75.7
6	05.7	01.9	66	62.8	20.4	126	119.8	38.9	186	176.9	57.5	246	234.0	76.0
7	06.7	02.2	67	63.7	20.7	127	120.8	39.2	187	177.8	57.8	247	234.9	76.3
8	07.6	02.5	68	64.7	21.0	128	121.7	39.6	188	178 8	58.1	248	235.9	76.6
9	08 6	02.8	69	65.6	21.3	129	122.7	39.9	189	179.7	58.4	249	236.8	76.9
10	09.5	03.1	70	66.6	21.6	130	123.6	40.2	190	180.7	58.7	250	237.8	77.3
11	10.5	03.4	71	67.5	21.9	131	124.6	40.5	191	181.7	59.0	251	238.7	77.6
12	11.4	03.7	72	68.5	22.2	132	125.5	40.8	192	182.6	59.3	252	239.7	77.9
13	12.4	04.0	73	69.4	22.6	133	126.5	41.1	193	183.6	59.6	253	240.6	78.2
14	13.3	04.3	74	70.4	22.9	134	127.4	41.4	194	184.5	59.9	254	241.6	78.5
15	14.3	04.6	75	71.3	23.2	135	128.4	41.7	195	185.5	60.3	255	242.5	78.8
16	15.2	04.9	76	72.3	23.5	136	129.3	42.0	196	186.4	60.6	256	243.5	79.1
17	16.2	05.3	77	73.2	23.8	137	130.3	42.3	197	187.4	60.9	257	244.4	79.4
18	17.1	05.6	78	74.2	24.1	138	131.2	42.6	198	188.3	61.2	258	245.4	79.7
19	18.1	05.9	79	75.1	24.4	139	132.2	43.0	199	189.3	61.5	259	246.3	80.0
20	19.0	06.2	80	76.1	24.7	140	133.1	43.3	200	190.2	61 8	260	247.3	80.3
21	20.0	06.5	81	77.0	25.0	141	134.1	43.6	201	191.2	62.1	261	248.2	80.7
22	20.9	06.8	82	78.0	25.3	142	135.1	43.9	202	192.1	62.4	262	249.2	81.0
23	21.9	07.1	83	78.9	25.6	143	136.0	44.2	203	193.1	62.7	263	250.1	81.3
24	22.8	07.4	84	79.9	26.0	144	137.0	44 5	204	194.0	63.0	264	251.1	81.6
25	23.8	07.7	85	80.8	26.3	145	137.9	44.8	205	195.0	63.3	265	252.0	81.9
26	24.7	08.0	86	81.8	26.6	146	138.9	45.1	206	195.9	63.7	266	253.0	82.2
27	25.7	08.3	87	82.7	26.9	147	139.8	45.4	207	196.9	64.0	267	253.9	82.5
28	26.6	08.7	88	83.7	27.2	148	140.8	45.7	208	197.8	64.3	268	254.9	82.8
29	27.6	09.0	89	84.6	27.5	149	141.7	46.0	209	198.8	64.6	269	255.8	83.1
30	28 5	09.3	90	85.6	27.8	150	142.7	46.4	210	199.7	64 9	270	256.8	83.4
31	29.5	09.6	91	86.5	28.1	151	143.6	46.7	211	200.7	65.2	271	257.7	83.7
32	30.4	09.9	92	87.5	28.4	152	144.6	47.0	212	201.6	65.5	272	258.7	84.1
33	31.4	10.2	93	88.4	28.7	153	145 5	47.3	213	202.6	65.8	273	259.6	84.4
34	32.3	10.5	94	89.4	29.0	154	146.5	47.6	214	203.5	66.1	274	260.6	84.7
35	33.3	10.8	95	90.4	29.4	155	147.4	47.9	215	204.5	66.4	275	261.5	85.0
36	34.2	11.1	96	91.3	29.7	156	148.4	48.2	216	205.4	66.7	276	262.5	85.3
37	35.2	11.4	97	92.3	30.0	157	149.3	48.5	217	206.4	67.1	277	263.4	85.6
38	36.1	11.7	98	93.2	30.3	158	150.3	48.8	218	207.3	67.4	278	264.4	85.9
39	37.1	12.1	99	94.2	30.6	159	151.2	49.1	219	208.3	67.7	279	265.3	86.2
40	38.0	12.4	100	95.1	30.9	160	152.2	49.4	220	209.2	68 0	280	266.3	86.5
41	39.0	12.7	101	96.1	31.2	161	153.1	49.8	221	210.2	68.3	281	267.2	86.8
42	39.9	13.0	102	97.0	31.5	162	154.1	50.1	222	211.1	68.6	282	268.2	87.1
43	40.9	13.3	103	98.0	31.8	163	155.0	50.4	223	212.1	68.9	283	269.1	87.5
44	41.8	13.6	104	98.9	32.1	164	156.0	50.7	224	213.0	69.2	284	270.1	87.8
45	42.8	13.9	105	99.9	32.4	165	156.9	51.0	225	214.0	69.5	285	271.1	88.1
46	43.7	14.2	106	100.8	32.8	166	157.9	51.3	226	214.9	69.8	286	272.0	88.4
47	44.7	14.5	107	101.8	33.1	167	158.8	51.6	227	215.9	70.1	287	273.0	88.7
48	45.7	14.8	108	102.7	33.4	168	159.8	51.9	228	216.8	70.5	288	273.9	89.0
49	46.6	15.1	109	103.7	33.7	169	160.7	52.2	229	217.8	70.8	289	274.9	89.3
50	47.6	15.5	110	104.6	34.0	170	161.7	52.5	230	218.7	71.1	290	275.8	89.6
51	48.5	15.8	111	105.6	34.3	171	162.6	52.8	231	219.7	71.4	291	276.8	89.9
52	49.5	16.1	112	106.5	34.6	172	163.6	53.2	232	220.6	71.7	292	277.7	90.2
53	50.4	16.4	113	107.5	34.9	173	164.5	53.5	233	221.6	72.0	293	278.7	90.5
54	51.4	16.7	114	108.4	35.2	174	165.5	53.8	234	222.5	72.3	294	279.6	90.9
55	52.3	17.0	115	109.4	35.5	175	166.4	54.1	235	223.5	72.6	295	280.6	91.2
56	53.3	17.3	116	110.3	35.8	176	167.4	54.4	236	224 4	72.9	296	281.5	91.5
57	54.2	17.6	117	111.3	36.2	177	168.3	54.7	237	225.4	73.2	297	282.5	91.8
58	55.2	17.9	118	112.2	36.5	178	169.3	55.0	238	226.4	73.5	298	283.4	92.1
59	56.1	18.2	119	113.2	36.8	179	170.2	55.3	239	227.3	73.9	299	284.4	92.4
60	57.1	18.5	120	114.1	37.1	180	171.2	55.6	240	228.3	74.2	300	285.3	92.7
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.9	00.3	61	57.7	19.9	121	114.4	39.4	181	171.1	58.9	241	227.9	78.5
2	01.9	00.7	62	58.6	20.2	122	115.4	39.7	182	172.1	59.3	242	228.8	78.8
3	02.8	01.0	63	59.6	20.5	123	116.3	40.0	183	173.0	59.6	243	229.8	79.1
4	03.8	01.3	64	60.5	20.8	124	117.2	40.4	184	174.0	59.9	244	230.7	79.4
5	04.7	01.6	65	61.5	21.2	125	118.2	40.7	185	174.9	60.2	245	231.7	79.8
6	05.7	02.0	66	62.4	21.5	126	119.1	41.0	186	175.9	60.6	246	232.6	80.1
7	06.6	02.3	67	63.3	21.8	127	120.1	41.3	187	176.8	60.9	247	233.5	80.4
8	07.6	02.6	68	64.3	22.1	128	121.0	41.7	188	177.8	61.2	248	234.5	80.7
9	08.5	02.9	69	65.2	22.5	129	122.0	42.0	189	178.7	61.5	249	235.4	81.1
10	09.5	03.3	70	66.2	22.8	130	122.9	42.3	190	179.6	61.9	250	236.4	81.4
11	10.4	03.6	71	67.1	23.1	131	123.9	42.6	191	180.6	62.2	251	237.3	81.7
12	11.3	03.9	72	68.1	23.4	132	124.8	43.0	192	181.5	62.5	252	238.3	82.0
13	12.3	04.2	73	69.0	23.8	133	125.8	43.3	193	182.5	62.8	253	239.2	82.4
14	13.2	04.6	74	70.0	24.1	134	126.7	43.6	194	183.4	63.2	254	240.2	82.7
15	14.2	04.9	75	70.9	24.4	135	127.6	44.0	195	184.4	63.5	255	241.1	83.0
16	15.1	05.2	76	71.9	24.7	136	128.6	44.3	196	185.3	63.8	256	242.1	83.3
17	16.1	05.5	77	72.8	25.1	137	129.5	44.6	197	186.3	64.1	257	243.0	83.7
18	17.0	05.9	78	73 8	25.4	138	130.5	44.9	198	187.2	64.5	258	243.9	84.0
19	18.0	06.2	79	74.7	25.7	139	131.4	45.3	199	188.2	64.8	259	244.9	84.3
20	18.9	06.5	80	75.6	26.0	140	132.4	45.6	200	189.1	65.1	260	245.8	84.6
21	19.9	06.8	81	76.6	26.4	141	133.3	45.9	201	190.0	65.4	261	246.8	85.0
22	20.8	07.2	82	77.5	26.7	142	134.3	46.2	202	191.0	65.8	262	247.7	85.3
23	21.7	07.5	83	78.5	27.0	143	135.2	46.6	203	191.9	66.1	263	248.7	85.6
24	22.7	07.8	84	79.4	27.3	144	136.2	46.9	204	192.9	66.4	264	249.6	86.0
25	23.6	08.1	85	80.4	27.7	145	137.1	47.2	205	193.8	66.7	265	250.6	86.3
26	24.6	08.5	86	81.3	28.0	146	138.0	47.5	206	194.8	67.1	266	251.5	86.6
27	25.5	08.8	87	82.3	28.3	147	139.0	47.9	207	195.7	67.4	267	252.5	86.9
28	26.5	09.1	88	83.2	28.7	148	139.9	48.2	208	196.7	67.7	268	253.4	87.3
29	27.4	09.4	89	84.2	29.0	149	140.9	48.5	209	197.6	68.0	269	254.3	87.6
30	28.4	09.8	90	85.1	29.3	150	141.8	48.8	210	198.6	68.4	270	255.3	87.9
31	29.3	10.1	91	86.0	29.6	151	142.8	49.2	211	199.5	68.7	271	256.2	88.2
32	30.3	10.4	92	87.0	30.0	152	143.7	49.5	212	200.4	69.0	272	257.2	88.6
33	31.2	10.7	93	87.9	30.3	153	144.7	49.8	213	201.4	69.3	273	258.1	88.9
34	32.1	11.1	94	88.9	30.6	154	145.6	50.1	214	202.3	69.7	274	259.1	89.2
35	33.1	11.4	95	89.8	30.9	155	146.6	50.5	215	203.3	70.0	275	260.0	89.5
36	34.0	11.7	96	90.8	31.3	156	147.5	50.8	216	204.2	70.3	276	261.0	89.9
37	35.0	12.0	97	91.7	31.6	157	148.4	51.1	217	205.2	70.6	277	261.9	90.2
38	35.9	12.4	98	92.7	31.9	158	149 4	51.4	218	206.1	71.0	278	262.9	90.5
39	36.9	12.7	99	93.6	32.2	159	150.3	51.8	219	207.1	71.3	279	263.8	90.8
40	37.8	13.0	100	94.6	32.6	160	151.3	52 1	220	208.0	71.6	280	264.7	91.2
41	38.8	13.3	101	95.5	32.9	161	152.2	52.4	221	209.0	72.0	281	265.7	91.5
42	39.7	13.7	102	96.4	33.2	162	153.2	52.7	222	209.9	72.3	282	266.6	91.8
43	40.7	14.0	103	97.4	33.5	163	154.1	53.1	223	210.9	72.6	283	267.6	92.1
44	41.6	14.3	104	98.3	33.9	164	155.1	53.4	224	211.8	72.9	284	268.5	92.5
45	42.5	14.7	105	99.3	34.2	165	156.0	53.7	225	212.7	73.3	285	269.5	92.8
46	43.5	15.0	106	100.2	34.5	166	157.0	54.0	226	213.7	73.6	286	270.4	93.1
47	44.4	15.3	107	101.2	34.8	167	157.9	54.4	227	214.6	73.9	287	271.4	93.4
48	45.4	15.6	108	102.1	35.2	168	158.8	54.7	228	215.6	74.2	288	272.3	93.8
49	46.3	16.0	109	103.1	35.5	169	159.8	55.0	229	216.5	74.6	289	273.3	94.1
50	47.3	16.3	110	104.0	35.8	170	160.7	55.3	230	217.5	74.9	290	274.2	94 4
51	48.2	16.6	111	105.0	36.1	171	161.7	55.7	231	218.4	75.2	291	275.1	94.7
52	49.2	16 9	112	105 9	36.5	172	162.6	56.0	232	219.4	75.5	292	276.1	95.1
53	50.1	17.3	113	106.8	36.8	173	163.6	56.3	233	220.3	75.9	293	277.0	95.4
54	51.1	17.6	114	107.8	37.1	174	164.5	56.6	234	221.3	76.2	294	278.0	95.7
55	52.0	17.9	115	108.7	37.4	175	165.5	57.0	235	222.2	76.5	295	278.9	96.0
56	52.9	18.2	116	109.7	37.8	176	166.4	57.3	236	223.1	76.8	296	279.9	96.4
57	53.9	18.6	117	110.6	38.1	177	167.4	57.6	237	224.1	77.2	297	280.8	96.7
58	54.8	18.9	118	111.6	38.4	178	168.3	58.0	238	225.0	77.5	298	281.8	97.0
59	55.8	19.2	119	112.5	38.7	179	169.2	58.3	239	226.0	77.8	299	282.7	97.3
60	56.7	19.5	120	113.5	39.1	180	170.2	58.6	240	226.9	78.1	300	283.7	97.7
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.9	00.3	61	57.3	20.9	121	113.7	41.4	181	170.1	61.9	241	226.5	82.4
2	01.9	00.7	62	58.3	21.2	122	114.6	41.7	182	171.0	62.2	242	227.4	82.8
3	02.8	01.0	63	59.2	21.5	123	115.6	42.1	183	172.0	62.6	243	228.3	83.1
4	03.8	01.4	64	60.1	21.9	124	116.5	42.4	184	172.9	62.9	244	229.3	83.5
5	04.7	01.7	65	61.1	22.2	125	117.5	42.8	185	173.8	63.3	245	230.2	83.8
6	05.6	02.1	66	62.0	22.6	126	118.4	43.1	186	174.8	63.6	246	231.2	84.1
7	06.6	02.4	67	63.0	22.9	127	119.3	43.4	187	175.7	64.0	247	232.1	84.5
8	07.5	02.7	68	63.9	23.3	128	120.3	43.8	188	176.7	64.3	248	233.0	84.8
9	08.5	03.1	69	64.8	23.6	129	121.2	44.1	189	177.6	64.6	249	234.0	85.2
10	09.4	03.4	70	65.8	23.9	130	122.2	44.5	190	178.5	65.0	250	234.9	85.5
11	10.3	03.8	71	66.7	24.3	131	123.1	44.8	191	179.5	65.3	251	235.9	85.8
12	11.3	04.1	72	67.7	24.6	132	124.0	45.1	192	180.4	65.7	252	236.8	86.2
13	12.2	04.4	73	68.6	25 0	133	125.0	45.5	193	181.4	66.0	253	237.7	86.5
14	13.2	04.8	74	69.5	25.3	134	125 9	45.8	194	182.3	66.4	254	238.7	86.9
15	14.1	05.1	75	70.5	25.7	135	126.9	46.2	195	183.2	66.7	255	239.6	87.2
16	15.0	05.5	76	71.4	26.0	136	127.8	46.5	196	184.2	67.0	256	240.6	87.6
17	16.0	05.8	77	72.4	26.3	137	128.7	46.9	197	185.1	67.4	257	241.5	87.9
18	16.9	06.2	78	73.3	26 7	138	129.7	47.2	198	186.1	67.7	258	242.4	88.2
19	17.9	06.5	79	74.2	27.0	139	130.6	47.5	199	187.0	68.1	259	243.4	88.6
20	18.8	06.8	80	75.2	27.4	140	131.6	47.9	200	187.9	68.4	260	244.3	88.9
21	19.7	07.2	81	76.1	27.7	141	132.5	48.2	201	188.9	68.7	261	245.3	89.3
22	20.7	07.5	82	77.1	28.0	142	133.4	48.6	202	189.8	69.1	262	246.2	89.6
23	21.6	07.9	83	78.0	28.4	143	134.4	48.9	203	190.8	69.4	263	247.1	90.0
24	22.6	08.2	84	78.9	28.7	144	135.3	49.3	204	191.7	69.8	264	248.1	90.3
25	23.5	08.6	85	79.9	29.1	145	136.3	49.6	205	192.6	70.1	265	249.0	90.6
26	24.4	08.9	86	80.8	29.4	146	137.2	49.9	206	193.6	70.5	266	250.0	91.0
27	25.4	09.2	87	81.8	29.8	147	138.1	50.3	207	194.5	70.8	267	250.9	91.3
28	26.3	09.6	88	82.7	30.1	148	139.1	50.6	208	195.5	71.1	268	251.8	91.7
29	27.3	09.9	89	83.6	30.4	149	140.0	51.0	209	196.4	71.5	269	252.8	92.0
30	28.2	10.3	90	84.6	30.8	150	141.0	51.3	210	197.3	71.8	270	253.7	92.3
31	29.1	10.6	91	85.5	31.1	151	141.9	51.6	211	198.3	72.2	271	254.7	92.7
32	30.1	10.9	92	86.5	31.5	152	142.8	52.0	212	199.2	72.5	272	255.6	93.0
33	31.0	11.3	93	87.4	31.8	153	143.8	52.3	213	200.2	72.9	273	256.5	93.4
34	31.9	11.6	94	88.3	32.1	154	144.7	52.7	214	201.1	73.2	274	257.5	93.7
35	32.9	12.0	95	89.3	32.5	155	145.7	53.0	215	202.0	73.5	275	258.4	94.1
36	33.8	12.3	96	90.2	32.8	156	146.6	53.4	216	203.0	73.9	276	259.4	94.4
37	34.8	12.7	97	91.2	33.2	157	147.5	53.7	217	203.9	74.2	277	260.3	94.7
38	35.7	13.0	98	92.1	33.5	158	148.5	54.0	218	204.9	74.6	278	261.2	95.1
39	36.6	13.3	99	93.0	33.9	159	149.4	54.4	219	205.8	74.9	279	262 2	95.4
40	37.6	13.7	100	94.0	34 2	160	150.4	54.7	220	206.7	75.2	280	263.1	95.8
41	38.5	14.0	101	94.9	34.5	161	151.3	55.1	221	207.7	75.6	281	264.1	96.1
42	39.5	14.4	102	95.8	34.9	162	152.2	55.4	222	208.6	75.9	282	265.0	96.4
43	40.4	14.7	103	96.8	35.2	163	153.2	55.7	223	209.6	76 3	283	265.9	96.8
44	41.3	15.0	104	97.7	35.6	164	154.1	56.1	224	210.5	76.6	284	266.9	97.1
45	42.3	15.4	105	98.7	35.9	165	155.0	56.4	225	211.4	77.0	285	267.8	97.5
46	43.2	15.7	106	99.6	36.3	166	156.0	56.8	226	212.4	77.3	286	268.8	97.8
47	44.2	16.1	107	100.5	36.6	167	156.9	57.1	227	213.3	77.6	287	269.7	98.2
48	45.1	16.4	108	101.5	36.9	168	157.9	57.5	228	214.2	78.0	288	270.6	98.5
49	46.0	16.8	109	102.4	37.3	169	158.8	57.8	229	215.2	78 3	289	271.6	98.8
50	47.0	17.1	110	103.4	37.6	170	159.7	58.1	230	216.1	78.7	290	272.5	99.2
51	47.9	17.4	111	104.3	38.0	171	160.7	58.5	231	217.1	79.0	291	273.5	99.5
52	48.9	17.8	112	105.2	38.3	172	161.6	58.8	232	218.0	79.3	292	274.4	99.9
53	49.8	18.1	113	106.2	38.6	173	162.6	59.2	233	218.9	79.7	293	275.3	100.2
54	50.7	18.5	114	107.1	39.0	174	163.5	59.5	234	219.9	80.0	294	276.3	100.6
55	51.7	18.8	115	108.1	39.3	175	164.4	59.9	235	220.8	80.4	295	277.2	100.9
56	52.6	19.2	116	109.0	39.7	176	165.4	60.2	236	221.8	80.7	296	278.1	101.2
57	53.6	19.5	117	109.9	40.0	177	166.3	60.5	237	222.7	81.1	297	279.1	101.6
58	54.5	19.8	118	110.9	40.4	178	167.3	60.9	238	223.6	81.4	298	280.0	101.9
59	55.4	20.2	119	111.8	40.7	179	168.2	61.2	239	224.6	81.7	299	281.0	102.3
60	56.4	20.5	120	112 8	41.0	180	169.1	61.6	240	225.5	82.1	300	281.9	102.6
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.9	00.4	61	56.9	21.9	121	113.0	43.4	181	169.0	64.9	241	225.0	86.4
2	01.9	00.7	62	57.9	22.2	122	113.9	43.7	182	169.9	65.2	242	225.9	86.7
3	02.8	01.1	63	58.8	22.6	123	114.8	44.1	183	170.8	65.6	243	226.9	87.1
4	03.7	01.4	64	59.7	22.9	124	115.8	44.4	184	171.8	65.9	244	227.8	87.4
5	04.7	01.8	65	60.7	23.3	125	116.7	44.8	185	172.7	66.3	245	228.7	87.8
6	05.6	02.2	66	61.6	23.7	126	117.6	45.2	186	173.6	66.7	246	229.7	88.2
7	06.5	02.5	67	62.5	24.0	127	118.6	45.5	187	174.6	67.0	247	230.6	88.5
8	07.5	02.9	68	63.5	24.4	128	119.5	45.9	188	175.5	67.4	248	231.5	88.9
9	08.4	03.2	69	64.4	24.7	129	120.4	46.2	189	176.4	67.7	249	232.5	89.2
10	09.3	03.6	70	65.4	25.1	130	121.4	46.6	190	177.4	68.1	250	233.4	89.6
11	10.3	03.9	71	66.3	25.4	131	122.3	46.9	191	178.3	68.4	251	234.3	90.0
12	11.2	04.3	72	67.2	25.8	132	123.2	47.3	192	179.2	68.8	252	235.3	90.3
13	12.1	04.7	73	68.2	26.2	133	124.2	47.7	193	180.2	69.2	253	236.2	90.7
14	13.1	05.0	74	69.1	26.5	134	125.1	48.0	194	181.1	69.5	254	237.1	91.0
15	14.0	05.4	75	70.0	26.9	135	126.0	48.4	195	182.0	69.9	255	238.1	91.4
16	14.9	05.7	76	71.0	27.2	136	127.0	48.7	196	183.0	70.2	256	239.0	91.7
17	15.9	06.1	77	71.9	27.6	137	127.9	49.1	197	183.9	70.6	257	239.9	92.1
18	16.8	06.5	78	72.8	28.0	138	128.8	49.5	198	184.8	71.0	258	240.9	92.5
19	17.7	06.8	79	73.8	28.3	139	129.8	49.8	199	185.8	71.3	259	241.8	92.8
20	18.7	07.2	80	74.7	28.7	140	130.7	50.2	200	186.7	71.7	260	242.7	93.2
21	19.6	07.5	81	75.6	29.0	141	131.6	50.5	201	187.6	72.0	261	243.7	93.5
22	20.5	07.9	82	76.6	29.4	142	132.6	50.9	202	188.6	72.4	262	244.6	93.9
23	21.5	08.2	83	77.5	29.7	143	133.5	51.2	203	189.5	72.7	263	245.5	94.3
24	22.4	08.6	84	78.4	30.1	144	134.4	51.6	204	190.5	73.1	264	246.5	94.6
25	23.3	09.0	85	79.4	30.5	145	135.4	52.0	205	191.4	73.5	265	247.4	95.0
26	24.3	09.3	86	80.3	30.8	146	136.3	52.3	206	192.3	73.8	266	248.3	95.3
27	25.2	09.7	87	81.2	31.2	147	137.2	52.7	207	193.3	74.2	267	249.3	95.7
28	26.1	10.0	88	82.2	31.5	148	138.2	53.0	208	194.2	74.5	268	250.2	96.0
29	27.1	10.4	89	83.1	31.9	149	139.1	53.4	209	195.1	74.9	269	251.1	96.4
30	28.0	10.8	90	84.0	32.3	150	140.0	53.8	210	196.1	75.3	270	252.1	96.8
31	28.9	11.1	91	85.0	32.6	151	141.0	54.1	211	197.0	75.6	271	253.0	97.1
32	29.9	11.5	92	85.9	33.0	152	141.9	54.5	212	197.9	76.0	272	253.9	97.5
33	30.8	11.8	93	86.8	33.3	153	142.8	54.8	213	198.9	76.3	273	254.9	97.8
34	31.7	12.2	94	87.8	33.7	154	143.8	55.2	214	199.8	76.7	274	255.8	98.2
35	32.7	12.5	95	88.7	34.0	155	144.7	55.5	215	200.7	77.0	275	256.7	98.6
36	33.6	12.9	96	89.6	34.4	156	145.6	55.9	216	201.7	77.4	276	257.7	98.9
37	34.5	13.3	97	90.6	34.8	157	146.6	56.3	217	202.6	77.8	277	258.6	99.3
38	35.5	13.6	98	91.5	35.1	158	147.5	56.6	218	203.5	78.1	278	259.5	99.6
39	36.4	14.0	99	92.4	35.5	159	148.4	57.0	219	204.5	78.5	279	260.5	100.0
40	37.3	14.3	100	93.4	35.8	160	149.4	57.3	220	205.4	78.8	280	261.4	100.3
41	38.3	14.7	101	94.3	36.2	161	150.3	57.7	221	206.3	79.2	281	262.3	100.7
42	39.2	15.1	102	95.2	36.6	162	151.2	58.1	222	207.3	79.6	282	263.3	101.1
43	40.1	15.4	103	96.2	36.9	163	152.2	58.4	223	208.2	79.9	283	264.2	101.4
44	41.1	15.8	104	97.1	37.3	164	153.1	58.8	224	209.1	80.3	284	265.1	101.8
45	42.0	16.1	105	98.0	37.6	165	154.0	59.1	225	210.1	80.6	285	266.1	102.1
46	42.9	16.5	106	99.0	38.0	166	155.0	59.5	226	211.0	81.0	286	267.0	102.5
47	43.9	16.8	107	99.9	38.3	167	155.9	59.8	227	211.9	81.3	287	267.9	102.9
48	44.8	17.2	108	100.8	38.7	168	156.8	60.2	228	212.9	81.7	288	268.9	103.2
49	45.7	17.6	109	101.8	39.1	169	157.8	60.6	229	213.8	82.1	289	269.8	103.6
50	46.7	17.9	110	102.7	39.4	170	158.7	60.9	230	214.7	82.4	290	270.7	103.9
51	47.6	18.3	111	103.6	39.8	171	159.6	61.3	231	215.7	82.8	291	271.7	104.3
52	48.5	18.6	112	104.6	40.1	172	160.6	61.6	232	216.6	83.1	292	272.6	104.6
53	49.5	19.0	113	105.5	40.5	173	161.5	62.0	233	217.5	83.5	293	273.5	105.0
54	50.4	19.4	114	106.4	40.9	174	162.4	62.4	234	218.5	83.9	294	274.5	105.4
55	51.3	19.7	115	107.4	41.2	175	163.4	62.7	235	219.4	84.2	295	275.4	105.7
56	52.3	20.1	116	108.3	41.6	176	164.3	63.1	236	220.3	84·6	296	276.3	106.1
57	53.2	20.4	117	109.2	41.9	177	165.2	63.4	237	221.3	84.9	297	277.3	106.4
58	54.1	20.8	118	110.2	42.3	178	166.2	63.8	238	222.2	85.3	298	278.2	106.8
59	55.1	21.1	119	111.1	42.6	179	167.1	64.1	239	223.1	85.6	299	279.1	107.2
60	56.0	21.5	120	112.0	43.0	180	168.0	64 5	240	224.1	86.0	300	280.1	107.5
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.9	00.4	61	56.6	22.9	121	112.2	45.3	181	167.8	67.8	241	223.5	90.3
2	01.9	00.7	62	57.5	23.2	122	113.1	45.7	182	168.7	68.2	242	224.4	90.7
3	02.8	01.1	63	58.4	23.6	123	114.0	46.1	183	169.7	68.6	243	225.3	91.0
4	03.7	01.5	64	59.3	24.0	124	115.0	46.5	184	170.6	68.9	244	226.2	91.4
5	04.6	01.9	65	60.3	24.3	125	115.9	46.8	185	171.5	69.3	245	227.2	91.8
6	05.6	02.2	66	61.2	24.7	126	116.8	47.2	186	172.5	69.7	246	228.1	92.2
7	06.5	02.6	67	62.1	25.1	127	117.8	47.6	187	173.4	70.1	247	229.0	92.5
8	07.4	03.0	68	63.0	25.5	128	118.7	47.9	188	174.3	70.4	248	229.9	92.9
9	08.3	03.4	69	64 0	25.8	129	119.6	48.3	189	175.2	70.8	249	230.9	93.3
10	09.3	03.7	70	64.9	26.2	130	120.5	48.7	190	176.2	71.2	250	231.8	93.7
11	10.2	04.1	71	65.8	26.6	131	121.5	49.1	191	177.1	71.5	251	232.7	94.0
12	11.1	04.5	72	66.8	27.0	132	122.4	49.4	192	178.0	71.9	252	233.7	94.4
13	12.1	04.9	73	67.7	27.3	133	123.3	49.8	193	178.9	72.3	253	234.6	94.8
14	13.0	05.2	74	68.6	27.7	134	124.2	50.2	194	179.9	72.7	254	235.5	95.2
15	13.9	05.6	75	69.5	28.1	135	125.2	50.6	195	180.8	73.0	255	236.4	95.5
16	14.8	06.0	76	70.5	28.5	136	126.1	50.9	196	181.7	73.4	256	237.4	95.9
17	15.8	06.4	77	71.4	28.8	137	127 0	51.3	197	182.7	73.8	257	238.3	96.3
18	16.7	06.7	78	72.3	29.2	138	128.0	51.7	198	183.6	74.2	258	239.2	96.6
19	17.6	07.1	79	73.2	29.6	139	128.9	52.1	199	184.5	74.5	259	240.1	97.0
20	18.5	07.5	80	74.2	30.0	140	129.8	52.4	200	185.4	74.9	260	241.1	97.4
21	19.5	07.9	81	75.1	30.3	141	130.7	52.8	201	186.4	75.3	261	242.0	97.8
22	20.4	08.2	82	76.0	30.7	142	131.7	53.2	202	187.3	75.7	262	242.9	98.1
23	21.3	08.6	83	77.0	31.1	143	132.6	53.6	203	188.2	76.0	263	243.8	98.5
24	22.3	09.0	84	77.9	31.5	144	133.5	53.9	204	189.1	76.4	264	244.8	98.9
25	23.2	09.4	85	78.8	31.8	145	134.4	54.3	205	190.1	76.8	265	245.7	99.3
26	24.1	09.7	86	79.7	32.2	146	135.4	54.7	206	191.0	77.2	266	246.6	99.6
27	25.0	10.1	87	80.7	32.6	147	136.3	55.1	207	191.9	77.5	267	247.6	100.0
28	26.0	10.5	88	81.6	33.0	148	137.2	55.4	208	192.9	77.9	268	248.5	100.4
29	26.9	10.9	89	82.5	33.3	149	138.2	55.8	209	193.8	78.3	269	249.4	100.8
30	27.8	11.2	90	83.4	33.7	150	139.1	56.2	210	194.7	78.7	270	250.3	101.1
31	28.7	11.6	91	84.4	34.1	151	140.0	56.6	211	195.6	79.0	271	251.3	101.5
32	29.7	12.0	92	85.3	34.5	152	140.9	56.9	212	196.6	79.4	272	252.2	101.9
33	30.6	12.4	93	86.2	34.8	153	141.9	57.3	213	197.5	79.8	273	253.1	102.3
34	31.5	12.7	94	87.2	35.2	154	142.8	57.7	214	198.4	80.2	274	254.0	102.6
35	32.5	13.1	95	88.1	35.6	155	143.7	58.1	215	199.3	80.5	275	255.0	103.0
36	33.4	13.5	96	89.0	36.0	156	144.6	58.4	216	200.3	80.9	276	255.9	103.4
37	34.3	13.9	97	89.9	36.3	157	145.6	58.8	217	201.2	81.3	277	256.8	103.8
38	35.2	14.2	98	90.9	36.7	158	146.5	59.2	218	202.1	81.7	278	257.8	104.1
39	36.2	14.6	99	91.8	37.1	159	147.4	59.6	219	203.1	82.0	279	258.7	104.5
40	37.1	15.0	100	92.7	37.5	160	148.3	59.9	220	204.0	82.4	280	259.6	104.9
41	38.0	15.4	101	93.6	37.8	161	149.3	60.3	221	204.9	82.8	281	260.5	105.3
42	38.9	15.7	102	94.6	38.2	162	150.2	60.7	222	205.8	83.2	282	261.5	105.6
43	39.9	16.1	103	95.5	38.6	163	151.1	61.1	223	206.8	83.5	283	262.4	106.0
44	40.8	16.5	104	96.4	39.0	164	152.1	61.4	224	207.7	83.9	284	263.3	106.4
45	41.7	16.9	105	97.4	39.3	165	153.0	61.8	225	208.6	84.3	285	264.2	106.8
46	42.7	17.2	106	98.3	39.7	166	153.9	62 2	226	209.5	84.7	286	265.2	107.1
47	43.6	17.6	107	99.2	40.1	167	154.8	62.6	227	210.5	85.0	287	266.1	107.5
48	44.5	18.0	108	100.1	40.5	168	155.8	62.9	228	211.4	85.4	288	267.0	107.9
49	45.4	18.4	109	101.1	40.8	169	156.7	63.3	229	212.3	85.8	289	268.0	108.3
50	46.4	18.7	110	102.0	41.2	170	157.6	63.7	230	213.3	86.2	290	268.9	108.6
51	47.3	19.1	111	102.9	41.6	171	158.5	64.1	231	214.2	86.5	291	269.8	109.0
52	48.2	19.5	112	103.8	42.0	172	159.5	64.4	232	215.1	86.9	292	270.7	109.4
53	49.1	19.9	113	104.8	42.3	173	160.4	64.8	233	216.0	87.3	293	271.7	109.8
54	50.1	20.2	114	105.7	42.7	174	161.3	65.2	234	217.0	87.7	294	272.6	110.1
55	51.0	20.6	115	106.6	43.1	175	162.3	65.6	235	217.9	88.0	295	273.5	110.5
56	51.9	21.0	116	107.6	43.5	176	163.2	65.9	236	218.8	88.4	296	274.4	110.9
57	52.8	21.4	117	108.5	43.8	177	164.1	66.3	237	219.7	88.8	297	275.4	111.3
58	53.8	21.7	118	109.4	44.2	178	165.0	66.7	238	220.7	89.2	298	276.3	111.6
59	54.7	22.1	119	110.3	44.6	179	166.0	67.1	239	221.6	89.5	299	277.2	112.0
60	55.6	22.5	120	111.3	45.0	180	166.9	67.4	240	222.5	89.9	300	278.2	112.4
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.9	00.4	61	56.2	23.8	121	111 4	47.3	181	166.6	70.7	241	221.8	94.2
2	01.8	00.8	62	57.1	24.2	122	112.3	47.7	182	167.5	71.1	242	222.8	94.6
3	02.8	01.2	63	58.0	24.6	123	113.2	48.1	183	168.5	71.5	243	223.7	94.9
4	03.7	01.6	64	58.9	25.0	124	114.1	48.5	184	169.4	71.9	244	224.6	95.3
5	04.6	02.0	65	59.8	25.4	125	115.1	48.8	185	170.3	72.3	245	225.5	95.7
6	05.5	02.3	66	60.8	25.8	126	116.0	49.2	186	171.2	72.7	246	226.4	96.1
7	06.4	02.7	67	61.7	26.2	127	116.9	49.6	187	172.1	73.1	247	227.4	96.5
8	07.4	03.1	68	62.6	26.6	128	117.8	50.0	188	173.1	73.5	248	228.3	96.9
9	08.3	03.5	69	63.5	27.0	129	118.7	50.4	189	174.0	73.8	249	229.2	97.3
10	09.2	03.9	70	64.4	27.4	130	119.7	50.8	190	174.9	74.2	250	230.1	97.7
11	10.1	04.3	71	65.4	27.7	131	120.6	51.2	191	175.8	74.6	251	231.0	98.1
12	11.0	04.7	72	66.3	28.1	132	121.5	51.6	192	176.7	75.0	252	232.0	98.5
13	12.0	05.1	73	67.2	28.5	133	122.4	52.0	193	177.7	75.4	253	232.9	98.9
14	12.9	05.5	74	68.1	28.9	134	123.3	52.4	194	178.6	75.8	254	233.8	99.2
15	13.8	05.9	75	69.0	29.3	135	124.3	52.7	195	179.5	76.2	255	234.7	99.6
16	14.7	06.3	76	70.0	29.7	136	125.2	53.1	196	180.4	76.6	256	235.6	100.0
17	15.6	06.6	77	70.9	30.1	137	126.1	53.5	197	181.3	77.0	257	236.6	100.4
18	16.6	07.0	78	71.8	30.5	138	127.0	53.9	198	182.3	77.4	258	237.5	100.8
19	17.5	07.4	79	72.7	30.9	139	128.0	54.3	199	183.2	77.8	259	238.4	101.2
20	18.4	07.8	80	73.6	31.3	140	128.9	54.7	200	184.1	78.1	260	239.3	101.6
21	19.3	08.2	81	74.6	31.6	141	129.8	55 1	201	185.0	78.5	261	240.3	102.0
22	20.3	08.6	82	75.5	32.0	142	130.7	55.5	202	185.9	78.9	262	241.2	102.4
23	21.2	09.0	83	76.4	32.4	143	131.6	55.9	203	186.9	79.3	263	242.1	102.8
24	22.1	09.4	84	77.3	32.8	144	132.6	56.3	204	187.8	79.7	264	243.0	103.2
25	23.0	09.8	85	78.2	33.2	145	133.5	56.7	205	188.7	80.1	265	243.9	103.5
26	23.9	10.2	86	79.2	33.6	146	134.4	57.0	206	189.6	80.5	266	244.9	103.9
27	24.9	10.5	87	80.1	34.0	147	135.3	57.4	207	190.5	80.9	267	245.8	104.3
28	25.8	10.9	88	81.0	34.4	148	136.2	57.8	208	191.5	81.3	268	246.7	104.7
29	26.7	11.3	89	81.9	34.8	149	137.2	58.2	209	192,4	81.7	269	247.6	105.1
30	27.6	11.7	90	82.8	35.2	150	138.1	58.6	210	193.3	82.1	270	248.5	105.5
31	28.5	12.1	91	83.8	35.6	151	139.0	59.0	211	194.2	82.4	271	249.5	105.9
32	29.5	12.5	92	84.7	35.9	152	139.9	59.4	212	195.1	82.8	272	250.4	106.3
33	30.4	12 9	93	85.6	36.3	153	140.8	59.8	213	196.1	83.2	273	251.3	106.7
34	31.3	13.3	94	86.5	36.7	154	141.8	60.2	214	197.0	83.6	274	252.2	107.1
35	32.2	13.7	95	87.4	37.1	155	142.7	60.6	215	197.9	84.0	275	253.1	107.5
36	33.1	14.1	96	88.4	37.5	156	143.6	61.0	216	198.8	84.4	276	254.1	107.8
37	34.1	14.5	97	89.3	37.9	157	144.5	61.3	217	199.7	84.8	277	255.0	108.2
38	35.0	14.8	98	90.2	38.3	158	145.4	61.7	218	200.7	85.2	278	255.9	108.6
39	35.9	15.2	99	91.1	38.7	159	146.4	62.1	219	201.6	85.6	279	256.8	109.0
40	36.8	15.6	100	92.1	39.1	160	147.3	62.5	220	202.5	86.0	280	257.7	109.4
41	37.7	16.0	101	93.0	39.5	161	148.2	62.9	221	203.4	86.4	281	258.7	109.8
42	38.7	16.4	102	93.9	39.9	162	149.1	63.3	222	204.4	86.7	282	259.6	110.2
43	39.6	16.8	103	94.8	40.2	163	150.0	63.7	223	205.3	87.1	283	260.5	110.6
44	40.5	17.2	104	95.7	40.6	164	151.0	64.1	224	206.2	87.5	284	261.4	111.0
45	41.4	17.6	105	96.7	41.0	165	151.9	64.5	225	207.1	87.9	285	262.3	111.4
46	42.3	18.0	106	97.6	41.4	166	152.8	64.9	226	208.0	88.3	286	263.3	111.7
47	43.3	18.4	107	98.5	41.8	167	153.7	65.3	227	209.0	88.7	287	264.2	112.1
48	44.2	18.8	108	99.4	42.2	168	154.6	65.6	228	209.9	89.1	288	265.1	112.5
49	45.1	19.1	109	100.3	42.6	169	155 6	66.0	229	210.8	89.5	289	266.0	112.9
50	46.0	19.5	110	101.3	43.0	170	156.5	66.4	230	211.7	89.9	290	266.9	113.3
51	46.9	19.9	111	102.2	43.4	171	157.4	66.8	231	212.6	90.3	291	267.9	113.7
52	47.9	20.3	112	103.1	43.8	172	158.3	67.2	232	213.6	90.6	292	268.8	114.1
53	48.8	20.7	113	104.0	44.2	173	159.2	67.6	233	214.5	91.0	293	269.7	114.5
54	49.7	21.1	114	104.9	44.5	174	160.2	68.0	234	215.4	91.4	294	270.6	114.9
55	50.6	21.5	115	105.9	44.9	175	161.1	68.4	235	216.3	91.8	295	271.5	115.3
56	51.5	21.9	116	106.8	45.3	176	162.0	68.8	236	217.2	92.2	296	272.5	115.7
57	52.5	22.3	117	107.7	45.7	177	162.9	69.2	237	218.2	92.6	297	273.4	116.0
58	53.4	22.7	118	108.6	46.1	178	163.8	69.6	238	219.1	93.0	298	274.3	116.4
59	54.3	23.1	119	109.5	46.5	179	164.8	69.9	239	220.0	93.4	299	275.2	116.8
60	55.2	23.4	120	110.5	46.9	180	165.7	70.3	240	220.9	93.8	300	276.2	117.2
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.9	00.4	61	55.7	24.8	121	110.5	49.2	181	165.4	73.6	241	220.2	98.0
2	01.8	00.8	62	56.6	25.2	122	111.5	49.6	182	166.3	74.0	242	221.1	98.4
3	02.7	01.2	63	57.6	25.6	123	112.4	50.0	183	167.2	74.4	243	222.0	98.8
4	03.7	01.6	64	58.5	26.0	124	113.3	50.4	184	168.1	74.8	244	222.9	99.2
5	04.6	02.0	65	59.4	26.4	125	114.2	50.8	185	169.0	75.2	245	223.8	99.7
6	05.5	02.4	66	60.3	26.8	126	115.1	51.2	186	169.9	75.7	246	224.7	100.1
7	06.4	02.8	67	61.2	27.3	127	116.0	51.7	187	170.8	76.1	247	225.6	100.5
8	07.3	03.3	68	62.1	27.7	128	116.9	52.1	188	171.7	76.5	248	226.6	100.9
9	08 2	03.7	69	63.0	28.1	129	117.8	52.5	189	172.7	76.9	249	227.5	101.3
10	09.1	04.1	70	63.9	28.5	130	118.8	52.9	190	173.6	77.3	250	228.4	101.7
11	10.0	04.5	71	64.9	28.9	131	119.7	53.3	191	174.5	77.7	251	229.3	102.1
12	11.0	04.9	72	65.8	29.3	132	120.6	53.7	192	175.4	78.1	252	230.2	102.5
13	11.9	05.3	73	66.7	29.7	133	121.5	54.1	193	176.3	78.5	253	231.1	102.9
14	12.8	05.7	74	67.6	30.1	134	122.4	54.5	194	177.2	78.9	254	232.0	103.3
15	13.7	06.1	75	68.5	30.5	135	123.3	54.9	195	178.1	79.3	255	233.0	103.7
16	14.6	06.5	76	69.4	30.9	136	124.2	55.3	196	179.1	79.7	256	233.9	104.1
17	15.5	06.9	77	70.3	31.3	137	125.2	55.7	197	180.0	80.1	257	234.8	104.5
18	16.4	07.3	78	71.3	31.7	138	126.1	56.1	198	180.9	80.5	258	235.7	104.9
19	17.4	07.7	79	72.2	32.1	139	127.0	56.5	199	181.8	80.9	259	236.6	105.3
20	18.3	08.1	80	73.1	32.5	140	127.9	56.9	200	182.7	81.3	260	237.5	105.8
21	19.2	08.5	81	74.0	32.9	141	128.8	57.3	201	183.6	81.8	261	238.4	106.2
22	20.1	08.9	82	74.9	33.4	142	129.7	57.8	202	184.5	82.2	262	239.3	106.6
23	21.0	09.4	83	75.8	33.8	143	130.6	58.2	203	185.4	82.6	263	240.3	107.0
24	21.9	09.8	84	76.7	34.2	144	131.6	58.6	204	186.4	83.0	264	241.2	107.4
25	22.8	10.2	85	77.7	34.6	145	132.5	59.0	205	187.3	83.4	265	242.1	107.8
26	23.8	10.6	86	78.6	35.0	146	133.4	59.4	206	188.2	83.8	266	243.0	108.2
27	24.7	11.0	87	79.5	35.4	147	134.3	59.8	207	189.1	84.2	267	243.9	108.6
28	25.6	11.4	88	80.4	35.8	148	135.2	60.2	208	190.0	84.6	268	244.8	109.0
29	26.5	11.8	89	81.3	36.2	149	136.1	60.6	209	190.9	85.0	269	245.7	109.4
30	27.4	12.2	90	82.2	36.6	150	137.0	61.0	210	191.8	85.4	270	246.7	109.8
31	28.3	12.6	91	83.1	37.0	151	137.9	61.4	211	192.8	85.8	271	247.6	110.2
32	29.2	13.0	92	84.0	37.4	152	138.9	61.8	212	193.7	86.2	272	248.5	110.6
33	30.1	13.4	93	85.0	37.8	153	139.8	62.2	213	194.6	86.6	273	249.4	111.0
34	31.1	13.8	94	85.9	38.2	154	140.7	62.6	214	195.5	87.0	274	250.3	111.4
35	32.0	14.2	95	86.8	38.6	155	141.6	63.0	215	196.4	87.4	275	251.2	111.9
36	32.9	14.6	96	87.7	39.0	156	142.5	63.5	216	197.3	87.9	276	252.1	112.3
37	33.8	15.0	97	88.6	39.5	157	143.4	63.9	217	198.2	88 3	277	253.1	112.7
38	34.7	15.5	98	89.5	39.9	158	144.3	64.3	218	199.2	88.7	278	254.0	113.1
39	35.6	15.9	99	90.4	40.3	159	145.3	64.7	219	200.1	89.1	279	254.9	113.5
40	36.5	16.3	100	91.4	40.7	160	146.2	65.1	220	201.0	89.5	280	255.8	113.9
41	37.5	16.7	101	92.3	41.1	161	147.1	65.5	221	201.9	89.9	281	256.7	114.3
42	38.4	17.1	102	93.2	41.5	162	148.0	65.9	222	202.8	90.3	282	257.6	114.7
43	39.3	17.5	103	94.1	41.9	163	148.9	66.3	223	203.7	90.7	283	258.5	115.1
44	40.2	17.9	104	95.0	42.3	164	149.8	66.7	224	204.6	91.1	284	259.4	115.5
45	41.1	18.3	105	95.9	42.7	165	150.7	67.1	225	205.5	91.5	285	260.4	115.9
46	42.0	18.7	106	96.8	43.1	166	151.6	67.5	226	206.5	91.9	286	261.3	116.3
47	42.9	19.1	107	97.7	43.5	167	152.6	67.9	227	207.4	92.3	287	262.2	116.7
48	43.9	19.5	108	98.7	43.9	168	153.5	68.3	228	208.3	92.7	288	263.1	117.1
49	44.8	19.9	109	99.6	44.3	169	154.4	68.7	229	209.2	93.1	289	264.0	117.5
50	45.7	20.3	110	100.5	44.7	170	155.3	69.1	230	210.1	93.5	290	264.9	118.0
51	46.6	20.7	111	101.4	45.1	171	156.2	69.6	231	211.0	94.0	291	265.8	118.4
52	47.5	21.2	112	102.3	45.6	172	157.1	70.0	232	211.9	94.4	292	266.8	118.8
53	48.4	21.6	113	103.2	46.0	173	158.0	70.4	233	212.9	94.8	293	267.7	119.2
54	49.3	22.0	114	104.1	46.4	174	159.0	70.8	234	213.8	95.2	294	268.6	119.6
55	50.2	22.4	115	105.1	46.8	175	159.9	71.2	235	214.7	95.6	295	269.5	120.0
56	51.2	22.8	116	106.0	47.2	176	160.8	71.6	236	215.6	96.0	296	270.4	120.4
57	52.1	23.2	117	106.9	47.6	177	161.7	72.0	237	216.5	96.4	297	271.3	120.8
58	53.0	23.6	118	107.8	48.0	178	162.6	72.4	238	217.4	96.8	298	272.2	121.2
59	53.9	24.0	119	108.7	48.4	179	163.5	72.8	239	218.3	97.2	299	273.2	121.6
60	54.8	24 4	120	109.6	48.8	180	164.4	73.2	240	219.3	97.6	300	274.1	122.0
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.9	00.4	61	55.3	25.8	121	109.7	51.1	181	164.0	76.5	241	218.4	101.9
2	01.8	00.8	62	56.2	26.2	122	110.6	51.6	182	164.9	76.9	242	219.3	102.3
3	02.7	01.3	63	57.1	26.6	123	111.5	52.0	183	165.9	77.3	243	220.2	102.7
4	03.6	01.7	64	58.0	27.0	124	112.4	52.4	184	166.8	77.8	244	221.1	103.1
5	04.5	02.1	65	58.9	27.5	125	113.3	52.8	185	167.7	78.2	245	222.0	103.5
6	05.4	02.5	66	59.8	27.9	126	114.2	53.2	186	168.6	78.6	246	223.0	104.0
7	06.3	03.0	67	60.7	28.3	127	115.1	53.7	187	169.5	79.0	247	223.9	104.4
8	07.3	03.4	68	61.6	28.7	128	116.0	54.1	188	170.4	79.5	248	224.8	104.8
9	08.2	03.8	69	62.5	29.2	129	116.9	54.5	189	171.3	79.9	249	225.7	105.2
10	09.1	04.2	70	63.4	29.6	130	117.8	54.9	190	172.2	80.3	250	226.6	105.7
11	10.0	04.6	71	64.3	30.0	131	118.7	55.4	191	173.1	80.7	251	227.5	106.1
12	10.9	05.1	72	65.3	30.4	132	119.6	55.8	192	174.0	81.1	252	228.4	106.5
13	11.8	05.5	73	66.2	30.9	133	120.5	56.2	193	174.9	81.6	253	229.3	106.9
14	12.7	05.9	74	67.1	31.3	134	121.4	56.6	194	175.8	82.0	254	230.2	107.3
15	13.6	06.3	75	68.0	31.7	135	122.4	57.1	195	176.7	82.4	255	231.1	107.8
16	14.5	06.8	76	68.9	32.1	136	123.3	57.5	196	177.6	82.8	256	232.0	108.2
17	15.4	07.2	77	69.8	32.5	137	124.2	57.9	197	178.5	83.3	257	232.9	108.6
18	16.3	07.6	78	70.7	33.0	138	125.1	58.3	198	179.4	83.7	258	233.8	109.0
19	17.2	08.0	79	71.6	33.4	139	126.0	58.7	199	180.4	84.1	259	234.7	109.5
20	18.1	08.5	80	72.5	33.8	140	126.9	59.2	200	181.3	84.5	260	235.6	109.9
21	19.0	08.9	81	73 4	34.2	141	127.8	59.6	201	182.2	84.9	261	236.5	110.3
22	19.9	09.3	82	74.3	34.7	142	128.7	60.0	202	183.1	85.4	262	237.5	110.7
23	20.8	09.7	83	75.2	35.1	143	129.6	60.4	203	184.0	85.8	263	238.4	111.1
24	21.8	10.1	84	76.1	35.5	144	130.5	60.9	204	184.9	86.2	264	239.3	111.6
25	22.7	10.6	85	77.0	35.9	145	131.4	61.3	205	185.8	86.6	265	240.2	112.0
26	23.6	11.0	86	77.9	36.3	146	132.3	61.7	206	186.7	87.1	266	241.1	112.4
27	24.5	11.4	87	78.8	36.8	147	133.2	62.1	207	187.6	87.5	267	242.0	112.8
28	25.4	11.8	88	79.8	37.2	148	134.1	62.5	208	188.5	87.9	268	242.9	113.3
29	26.3	12.3	89	80.7	37.6	149	135.0	63.0	209	189.4	88.3	269	243.8	113.7
30	27.2	12.7	90	81.6	38.0	150	135.9	63 4	210	190.3	88.7	270	244.7	114.1
31	28.1	13.1	91	82.5	38.5	151	136.9	63.8	211	191.2	89.2	271	245.6	114.5
32	29.0	13.5	92	83.4	38.9	152	137.8	64.2	212	192.1	89.6	272	246.5	115.0
33	29.9	13.9	93	84.3	39.3	153	138.7	64.7	213	193.0	90.0	273	247.4	115.4
34	30.8	14.4	94	85.2	39.7	154	139.6	65.1	214	193.9	90.4	274	248.3	115.8
35	31.7	14.8	95	86.1	40.1	155	140.5	65.5	215	194.9	90.9	275	249.2	116.2
36	32.6	15.2	96	87.0	40.6	156	141.4	65.9	216	195.8	91.3	276	250.1	116.6
37	33.5	15.6	97	87.9	41.0	157	142.3	66.4	217	196.7	91.7	277	251.0	117.1
38	34.4	16.1	98	88.8	41.4	158	143.2	66.8	218	197.6	92.1	278	252.0	117.5
39	35.3	16.5	99	89.7	41.8	159	144.1	67.2	219	198.5	92.6	279	252.9	117.9
40	36.3	16.9	100	90.6	42 3	160	145.0	67.6	220	199.4	93.0	280	253.8	118.3
41	37.2	17.3	101	91.5	42.7	161	145.9	68.0	221	200.3	93.4	281	254.7	118.8
42	38.1	17.7	102	92.4	43.1	162	146.8	68.5	222	201.2	93.8	282	255.6	119.2
43	39.0	18.2	103	93.3	43.5	163	147.7	68.9	223	202.1	94.2	283	256.5	119.6
44	39.9	18.6	104	94.3	44.0	164	148.6	69.3	224	203.0	94.7	284	257.4	120.0
45	40.8	19.0	105	95.2	44.4	165	149.5	69.7	225	203.9	95.1	285	258.3	120.4
46	41.7	19.4	106	96.1	44.8	166	150.4	70.2	226	204.8	95 5	286	259.2	120.9
47	42.6	19.9	107	97.0	45.2	167	151.4	70.6	227	205.7	95.9	287	260.1	121.3
48	43.5	20.3	108	97.9	45.6	168	152.3	71.0	228	206.6	96.4	288	261.0	121.7
49	44.4	20.7	109	98.8	46.1	169	153.2	71.4	229	207.5	96.8	289	261.9	122.1
50	45.3	21.1	110	99.7	46.5	170	154.1	71.8	230	208.5	97.2	290	262.8	122.6
51	46.2	21.5	111	100.6	46.9	171	155.0	72.3	231	209.4	97.6	291	263.7	123.0
52	47.1	22.0	112	101.5	47.3	172	155.9	72.7	232	210.3	98.0	292	264.6	123.4
53	48.0	22.4	113	102 4	47.8	173	156.8	73.1	233	211.2	98.5	293	265.5	123.8
54	48.9	22.8	114	103.3	48.2	174	157.7	73.5	234	212.1	98.9	294	266.5	124.2
55	49.8	23.2	115	104.2	48.6	175	158.6	74.0	235	213.0	99.3	295	267.4	124.7
56	50.8	23.7	116	105.1	49.0	176	159.5	74.4	236	213.9	99.7	296	268.3	125.1
57	51.7	24.1	117	106 0	49.4	177	160.4	74.8	237	214.8	100.2	297	269.2	125.5
58	52.6	24.5	118	106.9	49.9	178	161.3	75.2	238	215.7	100.6	298	270.1	125.9
59	53.5	24.9	119	107.9	50.3	179	162.2	75.6	239	216.6	101.0	299	271.0	126.4
60	54 4	25.4	120	108.8	50 7	180	163.1	76.1	240	217.5	101.4	300	271.9	126.8
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.9	00.4	61	54.8	26.7	121	108.8	53.0	181	162.7	79.3	241	216.6	105.6
2	01.8	00.9	62	55.7	27.2	122	109.7	53.5	182	163.6	79.8	242	217.5	106.1
3	02.7	01.3	63	56.6	27.6	123	110.6	53.9	183	164.5	80.2	243	218.4	106.5
4	03.6	01.8	64	57.5	28.1	124	111.5	54.4	184	165.4	80.7	244	219.3	107.0
5	04.5	02.2	65	58.4	28.5	125	112.3	54.8	185	166.3	81.1	245	220.2	107.4
6	05.4	02.6	66	59.3	28.9	126	113.2	55.2	186	167.2	81.5	246	221.1	107.8
7	06.3	03.1	67	60.2	29.4	127	114.1	55.7	187	168.1	82.0	247	222.0	108.3
8	07.2	03.5	68	61.1	29.8	128	115.0	56.1	188	169.0	82.4	248	222.9	108.7
9	08.1	03.9	69	62.0	30.2	129	115.9	56.5	189	169.9	82.9	249	223.8	109.2
10	09.0	04.4	70	62.9	30.7	130	116 8	57.0	190	170.8	83.3	250	224.7	109.6
11	09.9	04.8	71	63.8	31.1	131	117.7	57.4	191	171.7	83.7	251	225.6	110.0
12	10.8	05.3	72	64.7	31.6	132	118.6	57.9	192	172.6	84.2	252	226.5	110.5
13	11.7	05.7	73	65.6	32.0	133	119 5	58.3	193	173.5	84.6	253	227.4	110.9
14	12.6	06.1	74	66.5	32.4	134	120.4	58.7	194	174.4	85.0	254	228.3	111.3
15	13.5	06.6	75	67.4	32.9	135	121.3	59.2	195	175.3	85.5	255	229.2	111.8
16	14.4	07.0	76	68.3	33.3	136	122.2	59.6	196	176.2	85.9	256	230.1	112.2
17	15.3	07.5	77	69.2	33.8	137	123.1	60.1	197	177.1	86.4	257	231.0	112.7
18	16.2	07.9	78	70.1	34.2	138	124.0	60.5	198	178.0	86.8	258	231.9	113.1
19	17.1	08.3	79	71.0	34.6	139	124.9	60.9	199	178.9	87.2	259	232.8	113.5
20	18.0	08.8	80	71.9	35.1	140	125.8	61.4	200	179.8	87.7	260	233.7	114.0
21	18.9	09.2	81	72 8	35.5	141	126.7	61.8	201	180.7	88.1	261	234.6	114.4
22	19.8	09.6	82	73.7	35.9	142	127.6	62.2	202	181.6	88.6	262	235.5	114.9
23	20.7	10.1	83	74.6	36.4	143	128.5	62.7	203	182.5	89.0	263	236.4	115.3
24	21.6	10.5	84	75.5	36.8	144	129.4	63.1	204	183.4	89.4	264	237.3	115·7
25	22.5	11.0	85	76.4	37.3	145	130.3	63.6	205	184.3	89.9	265	238.2	116.2
26	23.4	11.4	86	77.3	37.7	146	131.2	64.0	206	185.2	90 3	266	239.1	116.6
27	24.3	11.8	87	78.2	38.1	147	132.1	64.4	207	186.1	90.7	267	240.0	117.0
28	25.2	12.3	88	79.1	38.6	148	133.0	64.9	208	186.9	91.2	268	240.9	117.5
29	26.1	12.7	89	80.0	39.0	149	133.9	65.3	209	187.8	91.6	269	241.8	117.9
30	27.0	13.2	90	80.9	39.5	150	134.8	65.8	210	188.7	92.1	270	242.7	118.4
31	27.9	13.6	91	81.8	39 9	151	135.7	66.2	211	189.6	92.5	271	243.6	118.8
32	28.8	14.0	92	82.7	40.3	152	136.6	66.6	212	190.5	92.9	272	244.5	119.2
33	29.7	14.5	93	83.6	40.8	153	137.5	67.1	213	191.4	93.4	273	245.4	119.7
34	30.6	14.9	94	84.5	41.2	154	138.4	67.5	214	192.3	93.8	274	246.3	120.1
35	31.5	15.3	95	85.4	41.6	155	139.3	67.9	215	193.2	94.2	275	247.2	120.6
36	32.4	15.8	96	86.3	42.1	156	140.2	68.4	216	194.1	94.7	276	248.1	121.0
37	33.3	16.2	97	87.2	42.5	157	141.1	68.8	217	195.0	95.1	277	249.0	121.4
38	34.2	16.7	98	88.1	43.0	158	142.0	69.3	218	195.9	95.6	278	249.9	121.9
39	35.1	17.1	99	89.0	43.4	159	142.9	69.7	219	196.8	96.0	279	250.8	122.3
40	36.0	17.5	100	89.9	43.8	160	143.8	70.1	220	197.7	96.4	280	251.7	122.7
41	36.9	18.0	101	90.8	44.3	161	144.7	70.6	221	198.6	96.9	281	252.6	123.2
42	37.7	18.4	102	91.7	44.7	162	145.6	71.0	222	199.5	97.3	282	253.5	123.6
43	38.6	18.8	103	92.6	45.2	163	146.5	71.5	223	200.4	97.8	283	254.4	124.1
44	39.5	19.3	104	93.5	45.6	164	147.4	71.9	224	201.3	98.2	284	255.3	124.5
45	40.4	19.7	105	94.4	46.0	165	148.3	72.3	225	202.2	98.6	285	256.2	124.9
46	41.3	20.2	106	95.3	46.5	166	149.2	72.8	226	203.1	99.1	286	257.1	125.4
47	42.2	20.6	107	96.2	46.9	167	150.1	73.2	227	204.0	99.5	287	258.0	125.8
48	43.1	21.0	108	97.1	47.3	168	151.0	73.6	228	204.9	99.9	288	258.9	126.3
49	44.0	21.5	109	98.0	47.8	169	151.9	74.1	229	205.8	100.4	289	259.8	126.7
50	44.9	21.9	110	98.9	48.2	170	152.8	74.5	230	206.7	100.8	290	260.7	127.1
51	45.8	22.4	111	99.8	48.7	171	153.7	75.0	231	207.6	101.3	291	261.5	127.6
52	46.7	22.8	112	100.7	49.1	172	154.6	75.4	232	208.5	101.7	292	262.4	128.0
53	47.6	23.2	113	101.6	49.5	173	155.5	75.8	233	209.4	102.1	293	263.3	128.4
54	48.5	23.7	114	102.5	50.0	174	156.4	76.3	234	210.3	102.6	294	264.2	128.9
55	49.4	24.1	115	103.4	50.4	175	157.3	76.7	235	211.2	103.0	295	265.1	129.3
56	50.3	24.5	116	104.3	50.9	176	158.2	77.2	236	212.1	103 5	296	266.0	129.8
57	51.2	25.0	117	105.2	51.3	177	159.1	77.6	237	213.0	103.9	297	266.9	130.2
58	52.1	25.4	118	106.1	51.7	178	160.0	78.0	238	213.9	104.3	298	267.8	130.6
59	53.0	25.9	119	107.0	52.2	179	160.9	78.5	239	214.8	104.8	299	268.7	131.1
60	53.9	26.3	120	107 9	52.6	180	161.8	78.9	240	215.7	105.2	300	269.6	131.5
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.
1	00.9	00.5	61	54.4	27.7	121	107.8	54.9	181	161.3	82.2	241	214.7
2	01.8	00.9	62	55.2	28.1	122	108.7	55.4	182	162.2	82.6	242	215.6
3	02.7	01.4	63	56.1	28.6	123	109.6	55.8	183	163.1	83.1	243	216.5
4	03.6	01.8	64	57.0	29.1	124	110.5	56.3	184	163.9	83.5	244	217.4
5	04.5	02.3	65	57.9	29.5	125	111.4	56.7	185	164.8	84.0	245	218.3
6	05.3	02.7	66	58.8	30.0	126	112.3	57.2	186	165.7	84.4	246	219.2
7	06.2	03.2	67	59.7	30.4	127	113.2	57.7	187	166.6	84.9	247	220.1
8	07.1	03.6	68	60.6	30.9	128	114.0	58.1	188	167.5	85.4	248	221.0
9	08.0	04.1	69	61.5	31.3	129	114.9	58.6	189	168.4	85.8	249	221.9
10	08.9	04.5	70	62.4	31.8	130	115.8	59.0	190	169.3	86.3	250	222.8
11	09.8	05.0	71	63.3	32.2	131	116.7	59.5	191	170.2	86.7	251	223.6
12	10.7	05.4	72	64.2	32.7	132	117.6	59.9	192	171.1	87.2	252	224.5
13	11.6	05.9	73	65.0	33.1	133	118.5	60.4	193	172.0	87.6	253	225.4
14	12.5	06.4	74	65.9	33.6	134	119.4	60.8	194	172.9	88.1	254	226.3
15	13.4	06.8	75	66.8	34.0	135	120.3	61.3	195	173.7	88.5	255	227.2
16	14.3	07.3	76	67.7	34.5	136	121.2	61.7	196	174.6	89.0	256	228.1
17	15.1	07.7	77	68.6	35.0	137	122.1	62.2	197	175.5	89.4	257	229.0
18	16.0	08.2	78	69.5	35.4	138	123.0	62.7	198	176.4	89.9	258	229.9
19	16.9	08.6	79	70.4	35.9	139	123.8	63.1	199	177.3	90.3	259	230.8
20	17.8	09.1	80	71.3	36.3	140	124.7	63.6	200	178.2	90.8	260	231.7
21	18.7	09.5	81	72.2	36.8	141	125.6	64.0	201	179.1	91.3	261	232.6
22	19.6	10.0	82	73.1	37.2	142	126.5	64.5	202	180.0	91.7	262	233.4
23	20.5	10.4	83	74.0	37.7	143	127.4	64.9	203	180.9	92.2	263	234.3
24	21.4	10.9	84	74.8	38.1	144	128.3	65.4	204	181.8	92.6	264	235.2
25	22.3	11.3	85	75.7	38.6	145	129.2	65.8	205	182.7	93.1	265	236.1
26	23.2	11.8	86	76.6	39.0	146	130.1	66.3	206	183.5	93.5	266	237.0
27	24.1	12.3	87	77.5	39.5	147	131.0	66.7	207	184.4	94.0	267	237.9
28	24.9	12.7	88	78.4	40.0	148	131.9	67.2	208	185.3	94.4	268	238.8
29	25.8	13.2	89	79.3	40.4	149	132.8	67.6	209	186.2	94.9	269	239.7
30	26.7	13.6	90	80.2	40.9	150	133.7	68.1	210	187.1	95.3	270	240.6
31	27.6	14.1	91	81.1	41.3	151	134.5	68.6	211	188.0	95.8	271	241.5
32	28.5	14.5	92	82.0	41.8	152	135.4	69.0	212	188.9	96.2	272	242.4
33	29.4	15.0	93	82.9	42.2	153	136.3	69.5	213	189.8	96.7	273	243.2
34	30.3	15.4	94	83.8	42.7	154	137.2	69.9	214	190.7	97.2	274	244.1
35	31.2	15.9	95	84.6	43.1	155	138.1	70.4	215	191.6	97.6	275	245.0
36	32.1	16.3	96	85.5	43.6	156	39.0	70.8	216	192.5	98.1	276	245.9
37	33.0	16.8	97	86.4	44.0	157	139.9	71.3	217	193.3	98.5	277	246.8
38	33.9	17.3	98	87.3	44.5	158	140.8	71.7	218	194.2	99.0	278	247.7
39	34.7	17.7	99	88.2	44.9	159	141.7	72.2	219	195.1	99.4	279	248.6
40	35.6	18.2	100	89.1	45.4	160	142.6	72.6	220	196.0	99.9	280	249.5
41	36.5	18.6	101	90.0	45.9	161	143.5	73.1	221	196.9	100.3	281	250.4
42	37.4	19.1	102	90.9	46.3	162	144.3	73.5	222	197.8	100.8	282	251.3
43	38.3	19.5	103	91.8	46.8	163	145.2	74.0	223	198.7	101.2	283	252.2
44	39.2	20.0	104	92.7	47.2	164	146.1	74.5	224	199.6	101.7	284	253.0
45	40.1	20.4	105	93.6	47.7	165	147.0	74.9	225	200.5	102.1	285	253.9
46	41.0	20.9	106	94.4	48.1	166	147.9	75.4	226	201.4	102.6	286	254.8
47	41.9	21.3	107	95.3	48.6	167	148.8	75.8	227	202.3	103.1	287	255.7
48	42.8	21.8	108	96.2	49.0	168	149.7	76.3	228	203.1	103.5	288	256.6
49	43.7	22.2	109	97.1	49.5	169	150.6	76.7	229	204.0	104.0	289	257.5
50	44.6	22.7	110	98.0	49.9	170	151.5	77.2	230	204.9	104.4	290	258.4
51	45.4	23.2	111	98.9	50.4	171	152.4	77.6	231	205.8	104.9	291	259.3
52	46.3	23.6	112	99.8	50.8	172	153.3	78.1	232	206.7	105.3	292	260.2
53	47.2	24.1	113	100.7	51.3	173	154.1	78.5	233	207.6	105.8	293	261.1
54	48.1	24.5	114	101.6	51.8	174	155.0	79.0	234	208.5	106.2	294	262.0
55	49.0	25.0	115	102.5	52.2	175	155.9	79.4	235	209.4	106.7	295	262.8
56	49.9	25.4	116	103.4	52.7	176	156.8	79.9	236	210.3	107.1	296	263.7
57	50.8	25.9	117	104.2	53.1	177	157.7	80.4	237	211.2	107.6	297	264.6
58	51.7	26.3	118	105.1	53.6	178	158.6	80.8	238	212.1	108.0	298	265.5
59	52.6	26.8	119	106.0	54.0	179	159.5	81.3	239	213.0	108.5	299	266.4
60	53.5	27.2	120	106.9	54.5	180	160.4	81.7	240	213.8	109.0	300	267.3
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.9	00.5	61	53.9	28.6	121	106.8	56.8	181	159.8	85.0	241	212.8	113.1
2	01.8	00.9	62	54.7	29.1	122	107.7	57.3	182	160.7	85.4	242	213.7	113.6
3	02.6	01.4	63	55.6	29.6	123	108.6	57.7	183	161.6	85.9	243	214.6	114.1
4	03.5	01.9	64	56.5	30.0	124	109.5	58.2	184	162.5	86.4	244	215.4	114.6
5	04.4	02.3	65	57.4	30.5	125	110.4	58.7	185	163.3	86.9	245	216.3	115.0
6	05.3	02.8	66	58.3	31.0	126	111.3	59.2	186	164.2	87.3	246	217.2	115.5
7	06.2	03.3	67	59.2	31.5	127	112.1	59.6	187	165.1	87.8	247	218.1	116.0
8	07.1	03.8	68	60.0	31.9	128	113.0	60.1	188	166.0	88.3	248	219.0	116.4
9	07.9	04.2	69	60.9	32.4	129	113.9	60.6	189	166.9	88.7	249	219.9	116.9
10	08.8	04.7	70	61.8	32.9	130	114.8	61.0	190	167.8	89.2	250	220.7	117.4
11	09.7	05.2	71	62.7	33.3	131	115.7	61.5	191	168.6	89.7	251	221.6	117.8
12	10.6	05.6	72	63.6	33.8	132	116.5	62.0	192	169.5	90.1	252	222.5	118.3
13	11.5	06.1	73	64.5	34.3	133	117.4	62.4	193	170.4	90.6	253	223.4	118.8
14	12.4	06.6	74	65.3	34.7	134	118.3	62.9	194	171.3	91.1	254	224.3	119.2
15	13.2	07.0	75	66.2	35.2	135	119.2	63.4	195	172.2	91.5	255	225.2	119.7
16	14.1	07.5	76	67.1	35.7	136	120.1	63.8	196	173.1	92.0	256	226.0	120.2
17	15.0	08.0	77	68.0	36.1	137	121.0	64.3	197	173.9	92.5	257	226.9	120.7
18	15.9	08.5	78	68.9	36.6	138	121.8	64.8	198	174.8	93.0	258	227.8	121.1
19	16.8	08.9	79	69.8	37.1	139	122.7	65.3	199	175.7	93.4	259	228.7	121.6
20	17.7	09.4	80	70.6	37.6	140	123.6	65.7	200	176.6	93.9	260	229.6	122.1
21	18.5	09.9	81	71.5	38.0	141	124.5	66.2	201	177.5	94.4	261	230.4	122.5
22	19.4	10.3	82	72.4	38.5	142	125.4	66.7	202	178.4	94.8	262	231.3	123.0
23	20.3	10.8	83	73.3	39.0	143	126.3	67.1	203	179.2	95.3	263	232.2	123.5
24	21.2	11.3	84	74.2	39.4	144	127.1	67.6	204	180.1	95.8	264	233.1	123.9
25	22.1	11.7	85	75.1	39.9	145	128.0	68.1	205	181.0	96.2	265	234.0	124.4
26	23.0	12.2	86	75.9	40.4	146	128.9	68.5	206	181.9	96.7	266	234.9	124.9
27	23.8	12.7	87	76.8	40.8	147	129.8	69.0	207	182.8	97.2	267	235.7	125.3
28	24.7	13.1	88	77.7	41.3	148	130.7	69.5	208	183.7	97.7	268	236.6	125.8
29	25.6	13.6	89	78.6	41.8	149	131.6	70.0	209	184.5	98.1	269	237.5	126.3
30	26.5	14.1	90	79.5	42.3	150	132.4	70.4	210	185.4	98.6	270	238.4	126.8
31	27.4	14.6	91	80.3	42.7	151	133.3	70.9	211	186.3	99.1	271	239.3	127.2
32	28.3	15.0	92	81.2	43.2	152	134.2	71.4	212	187.2	99.5	272	240.2	127.7
33	29.1	15.5	93	82.1	43.7	153	135.1	71.8	213	188.1	100.0	273	241.0	128.2
34	30.0	16.0	94	83.0	44.1	154	136.0	72.3	214	189.0	100.5	274	241.9	128.6
35	30.9	16.4	95	83.9	44.6	155	136.9	72.8	215	189.8	100.9	275	242.8	129.1
36	31.8	16.9	96	84.8	45.1	156	137.7	73.2	216	190.7	101.4	276	243.7	129.6
37	32.7	17.4	97	85.6	45.5	157	138.6	73.7	217	191.6	101.9	277	244.6	130.0
38	33.6	17.8	98	86.5	46.0	158	139.5	74.2	218	192.5	102.3	278	245.5	130.5
39	34.4	18.3	99	87.4	46.5	159	140.4	74.6	219	193.4	102.8	279	246.3	131.0
40	35.3	18.8	100	88.3	46.9	160	141.3	75.1	220	194.2	103.3	280	247.2	131.5
41	36.2	19.2	101	89.2	47.4	161	142.2	75.6	221	195.1	103.8	281	248.1	131.9
42	37.1	19.7	102	90.1	47.9	162	143.0	76.1	222	196.0	104.2	282	249.0	132.4
43	38.0	20.2	103	90.9	48.4	163	143.9	76.5	223	196.9	104.7	283	249.9	132.9
44	38.8	20.7	104	91.8	48.8	164	144.8	77.0	224	197.8	105.2	284	250.8	133.3
45	39.7	21.1	105	92.7	49.3	165	145.7	77.5	225	198.7	105.6	285	251.6	133.8
46	40.6	21.6	106	93.6	49.8	166	146.6	77.9	226	199.5	106.1	286	252.5	134.3
47	41.5	22.1	107	94.5	50.2	167	147.5	78.4	227	200.4	106.6	287	253.4	134.7
48	42.4	22.5	108	95.4	50.7	168	148.3	78.9	228	201.3	107.0	288	254.3	135.2
49	43.3	23.0	109	96.2	51.2	169	149.2	79.3	229	202.2	107.5	289	255.2	135.7
50	44.1	23.5	110	97.1	51.6	170	150.1	79.8	230	203.1	108.0	290	256.1	136.1
51	45.0	23.9	111	98.0	52.1	171	151.0	80.3	231	204.0	108.4	291	256.9	136.6
52	45.9	24.4	112	98.9	52.6	172	151.9	80.7	232	204.8	108.9	292	257.8	137.1
53	46.8	24.9	113	99.8	53.1	173	152.7	81.2	233	205.7	109.4	293	258.7	137.6
54	47.7	25.4	114	100.7	53.5	174	153.6	81.7	234	206.6	109.9	294	259.6	138.0
55	48.6	25.8	115	101.5	54.0	175	154.5	82.2	235	207.5	110.3	295	260.5	138.5
56	49.4	26.3	116	102.4	54.5	176	155.4	82.6	236	208.4	110.8	296	261.3	139.0
57	50.3	26.8	117	103.3	54.9	177	156.3	83.1	237	209.3	111.3	297	262.2	139.4
58	51.2	27.2	118	104.2	55.4	178	157.2	83.6	238	210.1	111.7	298	263.1	139.9
59	52.1	27.7	119	105.1	55.9	179	158.0	84.0	239	211.0	112.2	299	264.0	140.4
60	53.0	28.2	120	106.0	56.3	180	158.9	84.5	240	211.9	112.7	300	264.9	140.8
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.9	00.5	61	53.4	29.6	121	105.8	58.7	181	158.3	87.8	241	210.8	116.8
2	01.7	01.0	62	54.2	30.1	122	106.7	59.1	182	159.2	88.2	242	211.7	117.3
3	02.6	01.5	63	55.1	30.5	123	107.6	59.6	183	160.1	88.7	243	212.5	117.8
4	03.5	01.9	64	56.0	31.0	124	108.5	60.1	184	160.9	89.2	244	213.4	118.3
5	04.4	02.4	65	56.9	31.5	125	109.3	60.6	185	161.8	89.7	245	214.3	118.8
6	05.2	02.9	66	57.7	32.0	126	110.2	61.1	186	162.7	90.2	246	215.2	119.3
7	06.1	03.4	67	58.6	32.5	127	111.1	61.6	187	163.6	90.7	247	216.0	119.7
8	07.0	03.9	68	59.5	33.0	128	112.0	62.1	188	164.4	91.1	248	216.9	120.2
9	07.9	04.4	69	60.3	33.5	129	112.8	62.5	189	165.3	91.6	249	217.8	120.7
10	**08.7**	**04.8**	**70**	**61.2**	**33.9**	**130**	**113.7**	**63.0**	**190**	**166.2**	**92.1**	**250**	**218.7**	**121.2**
11	09.6	05.3	71	62.1	34.4	131	114.6	63.5	191	167.1	92.6	251	219.5	121.7
12	10.5	05.8	72	63.0	34.9	132	115.4	64.0	192	167.9	93.1	252	220.4	122.2
13	11.4	06.3	73	63.8	35.4	133	116.3	64.5	193	168.8	93.6	253	221.3	122.7
14	12.2	06.8	74	64.7	35.9	134	117.2	65.0	194	169.7	94.1	254	222.2	123.1
15	13.1	07.3	75	65.6	36.4	135	118.1	65.4	195	170.6	94.5	255	223.0	123.6
16	14.0	07.8	76	66.5	36.8	136	118.9	65.9	196	171.4	95.0	256	223.9	124.1
17	14.9	08.2	77	67.3	37.3	137	119.8	66.4	197	172.3	95.5	257	224.8	124.6
18	15.7	08.7	78	68.2	37.8	138	120.7	66.9	198	173.2	96.0	258	225.7	125.1
19	16.6	09.2	79	69.1	38.3	139	121.6	67.4	199	174.0	96.5	259	226.5	125.6
20	**17.5**	**09.7**	**80**	**70.0**	**38.8**	**140**	**122.4**	**67.9**	**200**	**174.9**	**97.0**	**260**	**227.4**	**126.1**
21	18.4	10.2	81	70.8	39.3	141	123.3	68.4	201	175.8	97.4	261	228.3	126.5
22	19.2	10.7	82	71.7	39.8	142	124.2	68.8	202	176.7	97.9	262	229.2	127.0
23	20.1	11.2	83	72.6	40.2	143	125.1	69.3	203	177.5	98.4	263	230.0	127.5
24	21.0	11.6	84	73.5	40.7	144	125.9	69.8	204	178.4	98.9	264	230.9	128.0
25	21.9	12.1	85	74.3	41.2	145	126.8	70.3	205	179.3	99.4	265	231.8	128.5
26	22.7	12.6	86	75.2	41.7	146	127.7	70.8	206	180.2	99.9	266	232.6	129.0
27	23.6	13.1	87	76.1	42.2	147	128.6	71.3	207	181.0	100.4	267	233.5	129.4
28	24.5	13.6	88	77.0	42.7	148	129.4	71.8	208	181.9	100.8	268	234.4	129.9
29	25.4	14.1	89	77.8	43.1	149	130.3	72.2	209	182.8	101.3	269	235.3	130.4
30	**26.2**	**14.5**	**90**	**78.7**	**43.6**	**150**	**131.2**	**72.7**	**210**	**183.7**	**101.8**	**270**	**236.1**	**130.9**
31	27.1	15.0	91	79.6	44.1	151	132.1	73.2	211	184.5	102.3	271	237.0	131.4
32	28.0	15.5	92	80.5	44.6	152	132.9	73.7	212	185.4	102.8	272	237.9	131.9
33	28.9	16.0	93	81.3	45.1	153	133.8	74.2	213	186.3	103.3	273	238.8	132.4
34	29.7	16.5	94	82.2	45.6	154	134.7	74.7	214	187.2	103.7	274	239.6	132.8
35	30.6	17.0	95	83.1	46.1	155	135.6	75.1	215	188.0	104.2	275	240.5	133.3
36	31.5	17.5	96	84.0	46.5	156	136.4	75.6	216	188.9	104.7	276	241.4	133.8
37	32.4	17.9	97	84.8	47.0	157	137.3	76.1	217	189.8	105.2	277	242.3	134.3
38	33.2	18.4	98	85.7	47.5	158	138.2	76.6	218	190.7	105.7	278	243.1	134.8
39	34.1	18.9	99	86.6	48.0	159	139.1	77.1	219	191.5	106.2	279	244.0	135.3
40	**35.0**	**19.4**	**100**	**87.5**	**48.5**	**160**	**139.9**	**77.6**	**220**	**192.4**	**106.7**	**280**	**244.9**	**135.7**
41	35.9	19.9	101	88.3	49.0	161	140.8	78.1	221	193.3	107.1	281	245.8	136.2
42	36.7	20.4	102	89.2	49.5	162	141.7	78.5	222	194.2	107.6	282	246.6	136.7
43	37.6	20.8	103	90.1	49.9	163	142.6	79.0	223	195.0	108.1	283	247.5	137.2
44	38.5	21.3	104	91.0	50.4	164	143.4	79.5	224	195.9	108.6	284	248.4	137.7
45	39.4	21.8	105	91.8	50.9	165	144.3	80.0	225	196.8	109.1	285	249.3	138.2
46	40.2	22.3	106	92.7	51.4	166	145.2	80.5	226	197.7	109.6	286	250.1	138.7
47	41.1	22.8	107	93.6	51.9	167	146.1	81.0	227	198.5	110.1	287	251.0	139.1
48	42.0	23.3	108	94.5	52.4	168	146.9	81.4	228	199.4	110.5	288	251.9	139.6
49	42.9	23.8	109	95.3	52.8	169	147.8	81.9	229	200.3	111.0	289	252.8	140.1
50	**43.7**	**24.2**	**110**	**96.2**	**53.3**	**170**	**148.7**	**82.4**	**230**	**201.2**	**111.5**	**290**	**253.6**	**140.6**
51	44.6	24.7	111	97.1	53.8	171	149.6	82.9	231	202.0	112.0	291	254.5	141.1
52	45.5	25.2	112	98.0	54.3	172	150.4	83.4	232	202.9	112.5	292	255.4	141.6
53	46.4	25.7	113	98.8	54.8	173	151.3	83.9	233	203.8	113.0	293	256.3	142.0
54	47.2	26.2	114	99.7	55.3	174	152.2	84.4	234	204.7	113.4	294	257.1	142.5
55	48.1	26.7	115	100.6	55.8	175	153.1	84.8	235	205.5	113.9	295	258.0	143.0
56	49.0	27.1	116	101.5	56.2	176	153.9	85.3	236	206.4	114.4	296	258.9	143.5
57	49.9	27.6	117	102.3	56.7	177	154.8	85.8	237	207.3	114.9	297	259.8	144.0
58	50.7	28.1	118	103.2	57.2	178	155.7	86.3	238	208.2	115.4	298	260.6	144.5
59	51.6	28.6	119	104.1	57.7	179	156.6	86.8	239	209.0	115.9	299	261.5	145.0
60	**52.5**	**29.1**	**120**	**105.0**	**58.2**	**180**	**157.4**	**87.3**	**240**	**209.9**	**116.4**	**300**	**262.4**	**145.4**
Dist.	*Dep.*	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.9	00.5	61	52.8	30.5	121	104.8	60.5	181	156.8	90.5	241	208.7	120.5
2	01.7	01.0	62	53 7	31.0	122	105.7	61.0	182	157.6	91.0	242	209.6	121.0
3	02.6	01.5	63	54.6	31.5	123	106.5	61.5	183	158.5	91.5	243	210.4	121.5
4	03.5	02.0	64	55.4	32.0	124	107.4	62.0	184	159.3	92.0	244	211.3	122.0
5	04.3	02.5	65	56.3	32.5	125	108.3	62.5	185	160.2	92.5	245	212.2	122.5
6	05.2	03.0	66	57.2	33.0	126	109.1	63.0	186	161.1	93.0	246	213.0	123.0
7	06.1	03.5	67	58.0	33.5	127	110.0	63.5	187	161.9	93.5	247	213.9	123.5
8	06.9	04.0	68	58.9	34.0	128	110.9	64.0	188	162.8	94.0	248	214.8	124.0
9	07.8	04.5	69	59.8	34.5	129	111.7	64.5	189	163.7	94.5	249	215.6	124.5
10	08.7	05.0	70	60.6	35.0	130	112.6	65.0	190	164.5	95.0	250	216.5	125.0
11	09.5	05.5	71	61.5	35.5	131	113.4	65.5	191	165.4	95.5	251	217.4	125.5
12	10.4	06.0	72	62.4	36.0	132	114.3	66.0	192	166.3	96.0	252	218.2	126.0
13	11.3	06.5	73	63.2	36.5	133	115.2	66.5	193	167.1	96.5	253	219.1	126.5
14	12.1	07.0	74	64.1	37.0	134	116.0	67.0	194	168.0	97.0	254	220.0	127.0
15	13.0	07.5	75	65.0	37.5	135	116.9	67.5	195	168.9	97.5	255	220.8	127.5
16	13.9	08.0	76	65.8	38.0	136	117.8	68.0	196	169.7	98.0	256	221.7	128.0
17	14.7	08.5	77	66.7	38.5	137	118.6	68.5	197	170.6	98.5	257	222.6	128.5
18	15.6	09.0	78	67.5	39.0	138	119.5	69.0	198	171.5	99.0	258	223.4	129.0
19	16.5	09.5	79	68.4	39.5	139	120.4	69.5	199	172.3	99.5	259	224.3	129.5
20	17.3	10.0	80	69.3	40.0	140	121.2	70.0	200	173.2	100.0	260	225.2	130.0
21	18.2	10.5	81	70.1	40.5	141	122.1	70.5	201	174.1	100.5	261	226.0	130.5
22	19.1	11.0	82	71.0	41.0	142	123.0	71.0	202	174.9	101.0	262	226.9	131.0
23	19.9	11.5	83	71.9	41.5	143	123.8	71.5	203	175.8	101.5	263	227.8	131.5
24	20.8	12.0	84	72.7	42.0	144	124.7	72.0	204	176.7	102.0	264	228.6	132.0
25	21.7	12.5	85	73.6	42 5	145	125.6	72.5	205	177.5	102.5	265	229.5	132.5
26	22.5	13.0	86	74.5	43.0	146	126.4	73.0	206	178.4	103.0	266	230.4	133.0
27	23.4	13.5	87	75.3	43.5	147	127.3	73.5	207	179.3	103.5	267	231.2	133.5
28	24.2	14.0	88	76.2	44.0	148	128.2	74.0	208	180.1	104.0	268	232.1	134.0
29	25.1	14.5	89	77.1	44.5	149	129.0	74.5	209	181.0	104.5	269	233.0	134.5
30	26.0	15.0	90	77.9	45.0	150	129.9	75.0	210	181.9	105.0	270	233.8	135.0
31	26.8	15.5	91	78 8	45 5	151	130.8	75.5	211	182.7	105.5	271	234.7	135.5
32	27.7	16.0	92	79.7	46.0	152	131.6	76.0	212	183.6	106.0	272	235.6	136.0
33	28.6	16.5	93	80.5	46.5	153	132.5	76.5	213	184.5	106.5	273	236.4	136.5
34	29.4	17.0	94	81.4	47.0	154	133.4	77.0	214	185.3	107.0	274	237.3	137.0
35	30.3	17.5	95	82.3	47.5	155	134.2	77.5	215	186.2	107.5	275	238.2	137.5
36	31.2	18.0	96	83.1	48.0	156	135.1	78.0	216	187.1	108.0	276	239.0	138.0
37	32.0	18.5	97	84.0	48.5	157	136.0	78.5	217	187.9	108.5	277	239.9	138.5
38	32.9	19.0	98	84.9	49.0	158	136.8	79.0	218	188.8	109.0	278	240.8	139.0
39	33.8	19.5	99	85.7	49.5	159	137.7	79.5	219	189.7	109.5	279	241.6	139.5
40	34.6	20.0	100	86.6	50.0	160	138.6	80.0	220	190.5	110.0	280	242.5	140.0
41	35.5	20.5	101	87.5	50.5	161	139.4	80.5	221	191.4	110.5	281	243.4	140.5
42	36.4	21.0	102	88.3	51.0	162	140.3	81.0	222	192.3	111.0	282	244.2	141.0
43	37.2	21.5	103	89.2	51.5	163	141.2	81.5	223	193.1	111.5	283	245.1	141.5
44	38.1	22.0	104	90.1	52.0	164	142.0	82.0	224	194.0	112.0	284	246.0	142.0
45	39.0	22.5	105	90.9	52.5	165	142.9	82.5	225	194.9	112.5	285	246.8	142.5
46	39.8	23.0	106	91.8	53.0	166	143.8	83.0	226	195.7	113.0	286	247.7	143.0
47	40.7	23.5	107	92.7	53.5	167	144.6	83.5	227	196.6	113.5	287	248.5	143.5
48	41.6	24.0	108	93.5	54.0	168	145.5	84.0	228	197.5	114.0	288	249.4	144.0
49	42.4	24.5	109	94.4	54.5	169	146.4	84.5	229	198.3	114.5	289	250.3	144.5
50	43.3	25.0	110	95.3	55.0	170	147.2	85.0	230	199.2	115.0	290	251.1	145.0
51	44.2	25.5	111	96.1	55.5	171	148.1	85.5	231	200.1	115.5	291	252.0	145.5
52	45.0	26.0	112	97.0	56.0	172	149.0	86.0	232	200.9	116.0	292	252.9	146.0
53	45.9	26.5	113	97.9	56.5	173	149.8	86.5	233	201.8	116.5	293	253.7	146.5
54	46.8	27.0	114	98.7	57.0	174	150.7	87.0	234	202.6	117.0	294	254.6	147.0
55	47.6	27.5	115	99.6	57.5	175	151.6	87.5	235	203.5	117.5	295	255.5	147.5
56	48.5	28.0	116	100.5	58.0	176	152.4	88.0	236	204.4	118.0	296	256.3	148.0
57	49.4	28.5	117	101.3	58.5	177	153.3	88.5	237	205.2	118.5	297	257.2	148.5
58	50.2	29.0	118	102.2	59.0	178	154.2	89.0	238	206.1	119.0	298	258.1	149.0
59	51.1	29.5	119	103.1	59.5	179	155.0	89.5	239	207.0	119 5	299	258.9	149.5
60	52.0	30.0	120	103.9	60.0	180	155.9	90.0	240	207.8	120.0	300	259.8	150.0
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.9	00.5	61	52.3	31.4	121	103.7	62.3	181	155.1	93.2	241	206.6	124.1
2	01.7	01.0	62	53.1	31.9	122	104.6	62.8	182	156.0	93.7	242	207.4	124.6
3	02.6	01.5	63	54.0	32.4	123	105.4	63.3	183	156.9	94.3	243	208.3	125.2
4	03.4	02.1	64	54.9	33.0	124	106.3	63.9	184	157.7	94.8	244	209.1	125.7
5	04.3	02.6	65	55.7	33.5	125	107.1	64.4	185	158.6	95.3	245	210.0	126.2
6	05.1	03.1	66	56.6	34.0	126	108.0	64.9	186	159.4	95.8	246	210.9	126.7
7	06.0	03.6	67	57.4	34.5	127	108.9	65.4	187	160.3	96.3	247	211.7	127.2
8	06.9	04.1	68	58.3	35.0	128	109.7	65.9	188	161.1	96.8	248	212.6	127.7
9	07.7	04.6	69	59.1	35.5	129	110.6	66.4	189	162.0	97.3	249	213.4	128.2
10	**08.6**	**05.2**	**70**	**60.0**	**36.1**	**130**	**111.4**	**67.0**	**190**	**162.9**	**97.9**	**250**	**214.3**	**128.8**
11	09.4	05.7	71	60.9	36.6	131	112.3	67.5	191	163.7	98.4	251	215.1	129.3
12	10.3	06.2	72	61.7	37.1	132	113.1	68.0	192	164.6	98.9	252	216.0	129.8
13	11.1	06.7	73	62.6	37.6	133	114.0	68.5	193	165.4	99.4	253	216.9	130.3
14	12.0	07.2	74	63.4	38.1	134	114.9	69.0	194	166.3	99.9	254	217.7	130.8
15	12.9	07.7	75	64.3	38.6	135	115 7	69.5	195	167.1	100.4	255	218.6	131.3
16	13.7	08.2	76	65.1	39.1	136	116.6	70.0	196	168.0	100.9	256	219.4	131.8
17	14.6	08.8	77	66.0	39.7	137	117.4	70.6	197	168.9	101.5	257	220.3	132.4
18	15.4	09.3	78	66.9	40.2	138	118.3	71.1	198	169.7	102.0	258	221.1	132.9
19	16.3	09.8	79	67.7	40.7	139	119.1	71.6	199	170.6	102.5	259	222.0	133.4
20	**17.1**	**10.3**	**80**	**68.6**	**41.2**	**140**	**120.0**	**72.1**	**200**	**171.4**	**103.0**	**260**	**222.9**	**133.9**
21	18.0	10.8	81	69.4	41.7	141	120.9	72.6	201	172.3	103.5	261	223.7	134.4
22	18.9	11.3	82	70.3	42.2	142	121.7	73.1	202	173.1	104.0	262	224.6	134.9
23	19.7	11.8	83	71.1	42.7	143	122.6	73.7	203	174.0	104.6	263	225.4	135.5
24	20.6	12.4	84	72 0	43.3	144	123 4	74.2	204	174.9	105.1	264	226.3	136.0
25	21.4	12.9	85	72.9	43.8	145	124.3	74.7	205	175.7	105.6	265	227.1	136.5
26	22.3	13.4	86	73.7	44.3	146	125.1	75.2	206	176.6	106.1	266	228.0	137.0
27	23.1	13.9	87	74.6	44.8	147	126.0	75.7	207	177.4	106.6	267	228.9	137.5
28	24.0	14.4	88	75.4	45.3	148	126 9	76.2	208	178.3	107.1	268	229.7	138.0
29	24.9	14.9	89	76.3	45.8	149	127.7	76.7	209	179.1	107.6	269	230.6	138.5
30	**25.7**	**15.5**	**90**	**77.1**	**46.4**	**150**	**128.6**	**77.3**	**210**	**180.0**	**108.2**	**270**	**231.4**	**139.1**
31	26.6	16.0	91	78.0	46.9	151	129.4	77.8	211	180.9	108.7	271	232.3	139.6
32	27.4	16.5	92	78.9	47.4	152	130.3	78.3	212	181.7	109.2	272	233.1	140.1
33	28.3	17.0	93	79.7	47.9	153	131.1	78.8	213	182.6	109.7	273	234.0	140.6
34	29.1	17.5	94	80.6	48.4	154	132.0	79.3	214	183.4	110.2	274	234.9	141.1
35	30.0	18.0	95	81.4	48.9	155	132.9	79.8	215	184.3	110.7	275	235.7	141.6
36	30.9	18.5	96	82.3	49.4	156	133.7	80.3	216	185.1	111.2	276	236.6	142.2
37	31.7	19.1	97	83.1	50.0	157	134.6	80.9	217	186.0	111.8	277	237.4	142.7
38	32.6	19.6	98	84.0	50.5	158	135.4	81.4	218	186.9	112.3	278	238.3	143.2
39	33.4	20.1	99	84.9	51.0	159	136.3	81.9	219	187.7	112.8	279	239.1	143.7
40	**34.3**	**20.6**	**100**	**85.7**	**51.5**	**160**	**137.1**	**82.4**	**220**	**188.6**	**113.3**	**280**	**240.0**	**144.2**
41	35.1	21.1	101	86.6	52.0	161	138.0	82.9	221	189.4	113.8	281	240.9	144.7
42	36.0	21.6	102	87.4	52.5	162	138.9	83.4	222	190.3	114.3	282	241.7	145.2
43	36.9	22.1	103	88.3	53 0	163	139.7	84.0	223	191.1	114.9	283	242.6	145.8
44	37.7	22.7	104	89.1	53.6	164	140.6	84.5	224	192.0	115.4	284	243.4	146.3
45	38.6	23.2	105	90.0	54.1	165	141.4	85.0	225	192.9	115.9	285	244.3	146.8
46	39.4	23.7	106	90.9	54.6	166	142.3	85.5	226	193.7	116.4	286	245.1	147.3
47	40.3	24.2	107	91.7	55.1	167	143.1	86.0	227	194.6	116.9	287	246.0	147.8
48	41.1	24.7	108	92.6	55.6	168	144.0	86.5	228	195.4	117.4	288	246.9	148.3
49	42.0	25.2	109	93.4	56.1	169	144.9	87.0	229	196.3	117.9	289	247.7	148.8
50	42.9	25.8	110	94.3	56.7	170	145.7	87.6	230	197.1	118.5	290	248.6	149.4
51	43.7	26.3	111	95.1	57.2	171	146.6	88.1	231	198.0	119.0	291	249.4	149.9
52	44.6	26.8	112	96.0	57.7	172	147.4	88 6	232	198.9	119.5	292	250.3	150.4
53	45.4	27.3	113	96.9	58.2	173	148.3	89.1	233	199.7	120.0	293	251.2	150.9
54	46.3	27.8	114	97 7	58 7	174	149.1	89.6	234	200.6	120.5	294	252.0	151.4
55	47.1	28.3	115	98.6	59.2	175	150.0	90.1	235	201.4	121.0	295	252.9	151.9
56	48.0	28.8	116	99.4	59.7	176	150.9	90.6	236	202.3	121.5	296	253.7	152.5
57	48.9	29.4	117	100.3	60 3	177	151.7	91.2	237	203.1	122.1	297	254.6	153.0
58	49.7	29.9	118	101.1	60.8	178	152.6	91.7	238	204.0	122.6	298	255.4	153.5
59	50.6	30.4	119	102.0	61.3	179	153.4	92.2	239	204.9	123.1	299	256.3	154.0
60	51.4	30.9	120	102 9	61.8	180	154.3	92 7	240	205.7	123.6	300	257.1	154.5
Dist.	*Dep.*	*Lat.*	*Dist.*	*Dep.*	*Lat.*	*Dist.*	*Dep.*	*Lat.*	*Dist.*	*Dep.*	*Lat.*	*Dist.*	*Dep.*	*Lat.*

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.8	00.5	61	51.7	32.3	121	102.6	64.1	181	153.5	95.9	241	204.4	127.7
2	01.7	01.1	62	52.6	32.9	122	103.5	64.7	182	154.3	96.4	242	205.2	128.2
3	02.5	01.6	63	53.4	33.4	123	104.3	65.2	183	155.2	97.0	243	206.1	128.8
4	03.4	02.1	64	54.3	33.9	124	105.2	65.7	184	156.0	97.5	244	206.9	129.3
5	04.2	02.6	65	55.1	34.4	125	106.0	66.2	185	156.9	98.0	245	207.8	129.8
6	05.1	03.2	66	56.0	35.0	126	106.9	66.8	186	157.7	98.6	246	208.6	130.4
7	05.9	03.7	67	56.8	35.5	127	107.7	67.3	187	158.6	99.1	247	209.5	130.9
8	06.8	04.2	68	57.7	36.0	128	108.6	67.8	188	159.4	99.6	248	210.3	131.4
9	07.6	04.8	69	58.5	36.6	129	109.4	68.4	189	160.3	100.2	249	211.2	131.9
10	08.5	05.3	70	59.4	37.1	130	110.2	68.9	190	161.1	100.7	250	212.0	132.5
11	09.3	05.8	71	60.2	37.6	131	111.1	69.4	191	162.0	101.2	251	212.9	133.0
12	10.2	06.4	72	61.1	38.2	132	111.9	69.9	192	162.8	101.7	252	213.7	133.5
13	11.0	06.9	73	61.9	38.7	133	112.8	70.5	193	163.7	102.3	253	214.6	134.1
14	11.9	07.4	74	62.8	39.2	134	113.6	71.0	194	164.5	102.8	254	215.4	134.6
15	12.7	07.9	75	63.6	39.7	135	114.5	71.5	195	165.4	103.3	255	216.3	135.1
16	13.6	08.5	76	64.5	40.3	136	115.3	72.1	196	166.2	103.9	256	217.1	135.7
17	14.4	09.0	77	65.3	40.8	137	116.2	72.6	197	167.1	104.4	257	217.9	136.2
18	15.3	09.5	78	66.1	41.3	138	117.0	73.1	198	167.9	104.9	258	218.8	136.7
19	16.1	10.1	79	67.0	41.9	139	117.9	73.7	199	168.8	105.5	259	219.6	137.2
20	17.0	10.6	80	67.8	42.4	140	118.7	74.2	200	169.6	106.0	260	220.5	137.8
21	17.8	11.1	81	68.7	42.9	141	119.6	74.7	201	170.5	106.5	261	221.3	138.3
22	18.7	11.7	82	69.5	43.5	142	120.4	75.2	202	171.3	107.0	262	222.2	138.8
23	19.5	12.2	83	70.4	44.0	143	121.3	75.8	203	172.2	107.6	263	223.0	139.4
24	20.4	12.7	84	71.2	44.5	144	122.1	76.3	204	173.0	108.1	264	223.9	139.9
25	21.2	13.2	85	72.1	45.0	145	123.0	76.8	205	173.8	108.6	265	224.7	140.4
26	22.0	13.8	86	72.9	45.6	146	123.8	77.4	206	174.7	109.2	266	225.6	141.0
27	22.9	14.3	87	73.8	46.1	147	124.7	77.9	207	175.5	109.7	267	226.4	141.5
28	23.7	14.8	88	74.6	46.6	148	125.5	78.4	208	176.4	110.2	268	227.3	142.0
29	24.6	15.4	89	75.5	47.2	149	126.4	79.0	209	177.2	110.8	269	228.1	142.5
30	25.4	15.9	90	76.3	47.7	150	127.2	79.5	210	178.1	111.3	270	229.0	143.1
31	26.3	16.4	91	77.2	48.2	151	128.1	80.0	211	178.9	111.8	271	229.8	143.6
32	27.1	17.0	92	78.0	48.8	152	128.9	80.5	212	179.8	112.3	272	230.7	144.1
33	28.0	17.5	93	78.9	49.3	153	129.8	81.1	213	180.6	112.9	273	231.5	144.7
34	28.8	18.0	94	79.7	49.8	154	130.6	81.6	214	181.5	113.4	274	232.4	145.2
35	29.7	18.5	95	80.6	50.3	155	131.4	82.1	215	182.3	113.9	275	233.2	145.7
36	30.5	19.1	96	81.4	50.9	156	132.3	82.7	216	183.2	114.5	276	234.1	146.3
37	31.4	19.6	97	82.3	51.4	157	133.1	83.2	217	184.0	115.0	277	234.9	146.8
38	32.2	20.1	98	83.1	51.9	158	134.0	83.7	218	184.9	115.5	278	235.8	147.3
39	33.1	20.7	99	84.0	52.5	159	134.8	84.3	219	185.7	116.1	279	236.6	147.8
40	33.9	21.2	100	84.8	53.0	160	135.7	84.8	220	186.6	116.6	280	237.5	148.4
41	34.8	21.7	101	85.7	53.5	161	136.5	85.3	221	187.4	117.1	281	238.3	148.9
42	35.6	22.3	102	86.5	54.1	162	137.4	85.8	222	188.3	117.6	282	239.1	149.4
43	36.5	22.8	103	87.3	54.6	163	138.2	86.4	223	189.1	118.2	283	240.0	150.0
44	37.3	23.3	104	88.2	55.1	164	139.1	86.9	224	190.0	118.7	284	240.8	150.5
45	38.2	23.8	105	89.0	55.6	165	139.9	87.4	225	190.8	119.2	285	241.7	151.0
46	39.0	24.4	106	89.9	56.2	166	140.8	88.0	226	191.7	119.8	286	242.5	151.6
47	39.9	24.9	107	90.7	56.7	167	141.6	88.5	227	192.5	120.3	287	243.4	152.1
48	40.7	25.4	108	91.6	57.2	168	142.5	89.0	228	193.4	120.8	288	244.2	152.6
49	41.6	26.0	109	92.4	57.8	169	143.3	89.6	229	194.2	121.4	289	245.1	153.1
50	42.4	26.5	110	93.3	58.3	170	144.2	90.1	230	195.1	121.9	290	245.9	153.7
51	43.3	27.0	111	94.1	58.8	171	145.0	90.6	231	195.9	122.4	291	246.8	154.2
52	44.1	27.6	112	95.0	59.4	172	145.9	91.1	232	196.7	122.9	292	247.6	154.7
53	44.9	28.1	113	95.8	59.9	173	146.7	91.7	233	197.6	123.5	293	248.5	155.3
54	45.8	28.6	114	96.7	60.4	174	147.6	92.2	234	198.4	124.0	294	249.3	155.8
55	46.6	29.1	115	97.5	60.9	175	148.4	92.7	235	199.3	124.5	295	250.2	156.3
56	47.5	29.7	116	98.4	61.5	176	149.3	93.3	236	200.1	125.1	296	251.0	156.9
57	48.3	30.2	117	99.2	62.0	177	150.1	93.8	237	201.0	125.6	297	251.9	157.4
58	49.2	30.7	118	100.1	62.5	178	151.0	94.3	238	201.8	126.1	298	252.7	157.9
59	50.0	31.3	119	100.9	63.1	179	151.8	94.9	239	202.7	126.7	299	253.6	158.4
60	50 9	31.8	120	101.8	63.6	180	152.6	95.4	240	203.5	127.2	300	254.4	159 0
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.8	00.5	61	51.2	33.2	121	101.5	65.9	181	151.8	98.6	241	202.1	131.3
2	01.7	01.1	62	52.0	33.8	122	102.3	66.4	182	152.6	99.1	242	203.0	131.8
3	02.5	01.6	63	52.8	34.3	123	103.2	67.0	183	153.5	99.7	243	203.8	132.3
4	03.4	02.2	64	53.7	34.9	124	104.0	67.5	184	154.3	100.2	244	204.6	132.9
5	04.2	02.7	65	54.5	35.4	125	104.8	68.1	185	155.2	100.8	245	205.5	133.4
6	05.0	03.3	66	55.4	35.9	126	105.7	68.6	186	156.0	101.3	246	206.3	134.0
7	05.9	03.8	67	56.2	36.5	127	106.5	69.2	187	156.8	101.8	247	207.2	134.5
8	06.7	04.4	68	57.0	37.0	128	107.3	69.7	188	157.7	102.4	248	208.0	135.1
9	07.5	04.9	69	57.9	37.6	129	108.2	70.3	189	158.5	102.9	249	208.8	135.6
10	08.4	05.4	70	58.7	38.1	130	109.0	70.8	190	159.3	103.5	250	209.7	136.2
11	09.2	06.0	71	59.5	38.7	131	109.9	71.3	191	160.2	104.0	251	210.5	136.7
12	10.1	06.5	72	60.4	39.2	132	110.7	71.9	192	161.0	104.6	252	211.3	137.2
13	10.9	07.1	73	61.2	39.8	133	111.5	72.4	193	161.9	105.1	253	212.2	137.8
14	11.7	07.6	74	62.1	40.3	134	112.4	73.0	194	162.7	105.7	254	213.0	138.3
15	12.6	08.2	75	62.9	40.8	135	113.2	73.5	195	163.5	106.2	255	213.9	138.9
16	13.4	08.7	76	63.7	41.4	136	114.1	74.1	196	164.4	106.7	256	214.7	139.4
17	14.3	09.3	77	64.6	41.9	137	114.9	74.6	197	165.2	107.3	257	215.5	140.0
18	15.1	09.8	78	65.4	42.5	138	115.7	75.2	198	166.1	107.8	258	216.4	140.5
19	15.9	10.3	79	66.3	43.0	139	116.6	75.7	199	166.9	108.4	259	217.2	141.1
20	16.8	10.9	80	67.1	43.6	140	117.4	76.2	200	167.7	108.9	260	218.1	141.6
21	17.6	11.4	81	67.9	44.1	141	118.3	76.8	201	168.6	109.5	261	218.9	142.2
22	18.5	12.0	82	68.8	44.7	142	119.1	77.3	202	169.4	110.0	262	219.7	142.7
23	19.3	12.5	83	69.6	45.2	143	119.9	77.9	203	170.3	110.6	263	220.6	143.2
24	20.1	13.1	84	70.4	45.7	144	120.8	78.4	204	171.1	111.1	264	221.4	143.8
25	21.0	13.6	85	71.3	46.3	145	121.6	79.0	205	171.9	111.7	265	222.2	144.3
26	21.8	14.2	86	72.1	46.8	146	122.4	79.5	206	172.8	112.2	266	223.1	144.9
27	22.6	14.7	87	73.0	47.4	147	123.3	80.1	207	173.6	112.7	267	223.9	145.4
28	23.5	15.2	88	73.8	47.9	148	124.1	80.6	208	174.4	113.3	268	224.8	146.0
29	24.3	15.8	89	74.6	48.5	149	125.0	81.2	209	175.3	113.8	269	225.6	146.5
30	25.2	16.3	90	75.5	49.0	150	125.8	81.7	210	176.1	114.4	270	226.4	147.1
31	26.0	16.9	91	76.3	49.6	151	126.6	82.2	211	177.0	114.9	271	227.3	147.6
32	26.8	17.4	92	77.2	50.1	152	127.5	82.8	212	177.8	115.5	272	228.1	148.1
33	27.7	18.0	93	78.0	50.7	153	128.3	83.3	213	178.6	116.0	273	229.0	148.7
34	28.5	18.5	94	78.8	51.2	154	129.2	83.9	214	179.5	116.6	274	229.8	149.2
35	29.4	19.1	95	79.7	51.7	155	130.0	84.4	215	180.3	117.1	275	230.6	149.8
36	30.2	19.6	96	80.5	52.3	156	130.8	85.0	216	181.2	117.6	276	231.5	150.3
37	31.0	20.2	97	81.4	52.8	157	131.7	85.5	217	182.0	118.2	277	232.3	150.9
38	31.9	20.7	98	82.2	53.4	158	132.5	86.1	218	182.8	118.7	278	233.2	151.4
39	32.7	21.2	99	83.0	53.9	159	133.3	86.6	219	183.7	119.3	279	234.0	152.0
40	33.5	21.8	100	83.9	54.5	160	134.2	87.1	220	184.5	119.8	280	234.8	152.5
41	34.4	22.3	101	84.7	55.0	161	135.0	87.7	221	185.3	120.4	281	235.7	153.0
42	35.2	22.9	102	85.5	55.6	162	135.9	88.2	222	186.2	120.9	282	236.5	153.6
43	36.1	23.4	103	86.4	56.1	163	136.7	88.8	223	187.0	121.5	283	237.3	154.1
44	36.9	24.0	104	87.2	56.6	164	137.5	89.3	224	187.9	122.0	284	238.2	154.7
45	37.7	24.5	105	88.1	57.2	165	138.4	89.9	225	188.7	122.5	285	239.0	155.2
46	38.6	25.1	106	88.9	57.7	166	139.2	90.4	226	189.5	123.1	286	239.9	155.8
47	39.4	25.6	107	89.7	58.3	167	140.1	91.0	227	190.4	123.6	287	240.7	156.3
48	40.3	26.1	108	90.6	58.8	168	140.9	91.5	228	191.2	124.2	288	241.5	156.9
49	41.1	26.7	109	91.4	59.4	169	141.7	92.0	229	192.1	124.7	289	242.4	157.4
50	41.9	27.2	110	92.3	59.9	170	142.6	92.6	230	192.9	125.3	290	243.2	157.9
51	42.8	27.8	111	93.1	60.5	171	143.4	93.1	231	193.7	125.8	291	244.1	158.5
52	43.6	28.3	112	93.9	61.0	172	144.3	93.7	232	194.6	126.4	292	244.9	159.0
53	44.4	28.9	113	94.8	61.5	173	145.1	94.2	233	195.4	126.9	293	245.7	159.6
54	45.3	29.4	114	95.6	62.1	174	145.9	94.8	234	196.2	127.4	294	246.6	160.1
55	46.1	30.0	115	96.4	62.6	175	146.8	95.3	235	197.1	128.0	295	247.4	160.7
56	47.0	30.5	116	97.3	63.2	176	147.6	95.9	236	197.9	128.5	296	248.2	161.2
57	47.8	31.0	117	98 1	63.7	177	148.4	96.4	237	198.8	129.1	297	249.1	161.8
58	48.6	31.6	118	99.0	64.3	178	149.3	96.9	238	199.6	129.6	298	249.9	162.3
59	49.5	32.1	119	99.8	64.8	179	150.1	97.5	239	200.4	130.2	299	250.8	162.8
60	50.3	32.7	120	100 6	65.4	180	151.0	98.0	240	201.3	130.7	300	251.6	163.4
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.8	00.6	61	50.6	34.1	121	100.3	67.7	181	150.1	101.2	241	199.8	134.8
2	01.7	01.1	62	51.4	34.7	122	101.1	68.2	182	150.9	101.8	242	200.6	135.3
3	02.5	01.7	63	52.2	35.2	123	102.0	68.8	183	151.7	102.3	243	201.5	135.9
4	03.3	02.2	64	53.1	35.8	124	102.8	69.3	184	152.5	102.9	244	202.3	136.4
5	04.1	02.8	65	53.9	36.3	125	103.6	69.9	185	153.4	103.5	245	203.1	137.0
6	05.0	03.4	66	54.7	36.9	126	104·5	70.5	186	154.2	104.0	246	203.9	137.6
7	05.8	03.9	67	55.5	37.5	127	105.3	71.0	187	155.0	104.6	247	204.8	138.1
8	06.6	04.5	68	56.4	38.0	128	106.1	71.6	188	155.9	105.1	248	205.6	138.7
9	07.5	05.0	69	57.2	38.6	129	106.9	72.1	189	156.7	105.7	249	206.4	139.2
10	08.3	05.6	70	58.0	39.1	130	107.8	72.7	190	157.5	106.2	250	207.3	139.8
11	09.1	06.2	71	58.9	39.7	131	108.6	73.3	191	158.3	106.8	251	208.1	140.4
12	09.9	06.7	72	59.7	40.3	132	109.4	73.8	192	159.2	107.4	252	208.9	140.9
13	10.8	07.3	73	60.5	40.8	133	110.3	74.4	193	160.0	107.9	253	209.7	141.5
14	11.6	07.8	74	61.3	41.4	134	111.1	74.9	194	160.8	108.5	254	210.6	142.0
15	12.4	08.4	75	62.2	41.9	135	111.9	75.5	195	161.7	109.0	255	211.4	142.6
16	13.3	08.9	76	63.0	42.5	136	112.7	76.1	196	162.5	109.6	256	212.2	143.2
17	14.1	09.5	77	63.8	43.1	137	113.6	76.6	197	163.3	110.2	257	213.1	143.7
18	14.9	10.1	78	64.7	43.6	138	114.4	77.2	198	164.1	110.7	258	213.9	144.3
19	15.8	10.6	79	65.5	44.2	139	115.2	77.7	199	165.0	111.3	259	214.7	144.8
20	16.6	11 2	80	66.3	44.7	140	116.1	78.3	200	165.8	111.8	260	215.5	145.4
21	17.4	11.7	81	67.2	45.3	141	116.9	78.8	201	166.6	112.4	261	216.4	145.9
22	18.2	12.3	82	68.0	45.9	142	117.7	79.4	202	167.5	113.0	262	217.2	146.5
23	19.1	12.9	83	68.8	46.4	143	118.6	80.0	203	168.3	113.5	263	218.0	147.1
24	19.9	13.4	84	69.6	47.0	144	119.4	80.5	204	169.1	114.1	264	218.9	147.6
25	20.7	14.0	85	70.5	47.5	145	120.2	81.1	205	170.0	114.6	265	219.7	148.2
26	21.6	14.5	86	71.3	48.1	146	121.0	81.6	206	170.8	115.2	266	220.5	148.7
27	22.4	15.1	87	72.1	48.6	147	121.9	82.2	207	171.6	115.8	267	221.4	149.3
28	23.2	15.7	88	73.0	49.2	148	122.7	82.8	208	172.4	116.3	268	222.2	149.9
29	24.0	16.2	89	73.8	49.8	149	123.5	83.3	209	173.3	116.9	269	223.0	150.4
30	24.9	16.8	90	74.6	50.3	150	124.4	83.9	210	174.1	117.4	270	223.8	151.0
31	25.7	17.3	91	75.4	50.9	151	125.2	84.4	211	174.9	118.0	271	224.7	151.5
32	26.5	17.9	92	76.3	51.4	152	126.0	85.0	212	175.8	118.5	272	225.5	152.1
33	27.4	18.5	93	77.1	52.0	153	126.8	85.6	213	176.6	119.1	273	226.3	152.7
34	28.2	19.0	94	77.9	52.6	154	127.7	86.1	214	177.4	119.7	274	227.2	153.2
35	29.0	19.6	95	78.8	53.1	155	128.5	86.7	215	178.2	120.2	275	228.0	153.8
36	29.8	20.1	96	79.6	53.7	156	129.3	87.2	216	179.1	120.8	276	228.8	154.3
37	30.7	20.7	97	80.4	54.2	157	130.2	87.8	217	179.9	121.3	277	229.6	154.9
38	31.5	21.2	98	81.2	54.8	158	131.0	88.4	218	180.7	121.9	278	230.5	155.5
39	32.3	21.8	99	82.1	55.4	159	131.8	88.9	219	181.6	122.5	279	231.3	156.0
40	33.2	22.4	100	82.9	55.9	160	132.6	89.5	220	182.4	123.0	280	232.1	156.6
41	34.0	22.9	101	83.7	56.5	161	133.5	90.0	221	183.2	123.6	281	233.0	157.1
42	34.8	23.5	102	84.6	57.0	162	134.3	90.6	222	184.0	124.1	282	233.8	157.7
43	35.6	24.0	103	85.4	57.6	163	135.1	91.1	223	184.9	124.7	283	234.6	158.3
44	36.5	24.6	104	86.2	58.2	164	136.0	91.7	224	185.7	125.3	284	235.4	158.8
45	37.3	25.2	105	87.0	58.7	165	136.8	92.3	225	186.5	125.8	285	236.3	159.4
46	38.1	25.7	106	87.9	59.3	166	137.6	92.8	226	187.4	126.4	286	237.1	159.9
47	39.0	26.3	107	88.7	59.8	167	138.4	93.4	227	188.2	126.9	287	237.9	160.5
48	39.8	26.8	108	89.5	60.4	168	139.3	93.9	228	189.0	127.5	288	238.8	161.0
49	40.6	27.4	109	90.4	61.0	169	140.1	94.5	229	189.8	128.1	289	239.6	161.6
50	41.5	28.0	110	91.2	61.5	170	140.9	95.1	230	190.7	128.6	290	240.4	162.2
51	42.3	28.5	111	92.0	62.1	171	141.8	95.6	231	191.5	129.2	291	241.2	162.7
52	43.1	29.1	112	92.9	62.6	172	142.6	96.2	232	192.3	129.7	292	242.1	163.3
53	43.9	29.6	113	93.7	63.2	173	143.4	96.7	233	193.2	130.3	293	242.9	163.8
54	44.8	30.2	114	94.5	63.7	174	144.3	97.3	234	194.0	130.9	294	243.7	164.4
55	45.6	30.8	115	95.3	64.3	175	145.1	97.9	235	194.8	131.4	295	244.6	165.0
56	46.4	31.3	116	96.2	64.9	176	145.9	98.4	236	195.7	132.0	296	245.4	165.5
57	47.3	31.9	117	97.0	65.4	177	146.7	99.0	237	196.5	132.5	297	246.2	166.1
58	48.1	32.4	118	97.8	66.0	178	147.6	99.5	238	197.3	133.1	298	247.1	166.6
59	48.9	33.0	119	98.7	66.5	179	148.4	100.1	239	198.1	133.6	299	247.9	167.2
60	49.7	33.6	120	99.5	67.1	180	149.2	100.7	240	199.0	134.2	300	248.7	167.8
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.8	00.6	61	50.0	35.0	121	99.1	69.4	181	148.3	103.8	241	197.4	138.2
2	01.6	01.1	62	50.8	35.6	122	99.9	70.0	182	149.1	104.4	242	198.2	138.8
3	02.5	01.7	63	51.6	36.1	123	100.8	70.5	183	149.9	105.0	243	199.1	139.4
4	03.3	02.3	64	52.4	36.7	124	101.6	71.1	184	150.7	105.5	244	199.9	140.0
5	04.1	02.9	65	53.2	37.3	125	102.4	71.7	185	151.5	106.1	245	200.7	140.5
6	04.9	03.4	66	54.1	37.9	126	103.2	72.3	186	152.4	106.7	246	201.5	141.1
7	05.7	04.0	67	54.9	38.4	127	104.0	72.8	187	153.2	107.3	247	202.3	141.7
8	06.6	04.6	68	55.7	39.0	128	104.9	73.4	188	154.0	107.8	248	203.1	142.2
9	07.4	05.2	69	56.5	39.6	129	105.7	74.0	189	154.8	108.4	249	204.0	142.8
10	08.2	05.7	70	57.3	40.2	130	106.5	74.6	190	155.6	109.0	250	204.8	143.4
11	09.0	06.3	71	58.2	40.7	131	107.3	75.1	191	156.5	109.6	251	205.6	144.0
12	09.8	06.9	72	59.0	41.3	132	108.1	75.7	192	157.3	110.1	252	206.4	144.5
13	10.6	07.5	73	59.8	41.9	133	108.9	76.3	193	158.1	110.7	253	207.2	145.1
14	11.5	08.0	74	60.6	42.4	134	109.8	76.9	194	158.9	111.3	254	208.1	145.7
15	12.3	08.6	75	61.4	43.0	135	110.6	77.4	195	159.7	111.8	255	208.9	146.3
16	13.1	09.2	76	62.3	43.6	136	111.4	78.0	196	160.6	112.4	256	209.7	146.8
17	13.9	09.8	77	63.1	44.2	137	112.2	78.6	197	161.4	113.0	257	210.5	147.4
18	14.7	10.3	78	63.9	44.7	138	113.0	79.2	198	162.2	113.6	258	211.3	148.0
19	15.6	10.9	79	64.7	45.3	139	113.9	79.7	199	163.0	114.1	259	212.2	148.6
20	16.4	11.5	80	65.5	45.9	140	114.7	80.3	200	163.8	114.7	260	213.0	149.1
21	17.2	12.0	81	66.4	46.5	141	115.5	80.9	201	164.6	115.3	261	213.8	149.7
22	18.0	12.6	82	67.2	47.0	142	116.3	81.4	202	165.5	115.9	262	214.6	150.3
23	18.8	13.2	83	68.0	47.6	143	117.1	82.0	203	166.3	116.4	263	215.4	150.9
24	19.7	13.8	84	68.8	48.2	144	118.0	82.6	204	167.1	117.0	264	216.3	151.4
25	20.5	14.3	85	69.6	48.8	145	118.8	83.2	205	167.9	117.6	265	217.1	152.0
26	21.3	14.9	86	70.4	49.3	146	119.6	83.7	206	168.7	118.2	266	217.9	152.6
27	22.1	15.5	87	71.3	49.9	147	120.4	84.3	207	169.6	118.7	267	218.7	153.1
28	22.9	16.1	88	72.1	50.5	148	121.2	84.9	208	170.4	119.3	268	219.5	153.7
29	23.8	16.6	89	72.9	51.0	149	122.1	85.5	209	171.2	119.9	269	220.4	154.3
30	24.6	17.2	90	73 7	51.6	150	122.9	86.0	210	172.0	120.5	270	221.2	154.9
31	25.4	17.8	91	74.5	52.2	151	123.7	86.6	211	172.8	121.0	271	222.0	155.4
32	26.2	18.4	92	75.4	52.8	152	124 5	87.2	212	173.7	121.6	272	222.8	156.0
33	27.0	18.9	93	76.2	53.3	153	125.3	87.8	213	174.5	122.2	273	223.6	156.6
34	27.9	19.5	94	77.0	53.9	154	126.1	88.3	214	175.3	122.7	274	224.4	157.2
35	28.7	20.1	95	77.8	54.5	155	127.0	88.9	215	176.1	123.3	275	225.3	157.7
36	29.5	20.6	96	78.6	55.1	156	127.8	89.5	216	176.9	123.9	276	226.1	158.3
37	30.3	21.2	97	79.5	55.6	157	128.6	90.1	217	177.8	124.5	277	226.9	158.9
38	31.1	21.8	98	80.3	56.2	158	129.4	90.6	218	178.6	125.0	278	227.7	159.5
39	31.9	22.4	99	81.1	56.8	159	130.2	91.2	219	179.4	125.6	279	228.5	160.0
40	32.8	22.9	100	81.9	57.4	160	131.1	91.8	220	180.2	126.2	280	229.4	160.6
41	33.6	23.5	101	82.7	57.9	161	131.9	92.3	221	181.0	126.8	281	230.2	161.2
42	34.4	24.1	102	83.6	58.5	162	132.7	92.9	222	181.9	127.3	282	231.0	161.7
43	35.2	24.7	103	84.4	59.1	163	133.5	93.5	223	182.7	127.9	283	231.8	162.3
44	36.0	25.2	104	85.2	59.7	164	134 3	94.1	224	183.5	128.5	284	232.6	162.9
45	36.9	25.8	105	86.0	60.2	165	135.2	94.6	225	184.3	129.1	285	233.5	163.5
46	37.7	26.4	106	86.8	60.8	166	136.0	95.2	226	185.1	129.6	286	234.3	164.0
47	38.5	27.0	107	87.6	61.4	167	136.8	95.8	227	185.9	130.2	287	235.1	164.6
48	39.3	27.5	108	88.5	61.9	168	137.6	96.4	228	186.8	130.8	288	235.9	165.2
49	40.1	28.1	109	89.3	62.5	169	138.4	96.9	229	187.6	131.3	289	236.7	165.8
50	41.0	28.7	110	90.1	63.1	170	139.3	97.5	230	188.4	131.9	290	237.6	166.3
51	41.8	29.3	111	90.9	63.7	171	140.1	98.1	231	189.2	132.5	291	238.4	166.9
52	42.6	29.8	112	91.7	64.2	172	140.9	98.7	232	190.0	133.1	292	239.2	167.5
53	43.4	30.4	113	92.6	64.8	173	141.7	99.2	233	190.9	133.6	293	240.0	168.1
54	44.2	31.0	114	93.4	65.4	174	142.5	99.8	234	191.7	134.2	294	240.8	168.6
55	45.1	31.5	115	94.2	66.0	175	143.4	100.4	235	192.5	134.8	295	241.6	169.2
56	45.9	32.1	116	95.0	66.5	176	144.2	100.9	236	193 3	135.4	296	242.5	169.8
57	46.7	32.7	117	95.8	67.1	177	145.0	101.5	237	194.1	135.9	297	243.3	170.4
58	47.5	33.3	118	96.7	67.7	178	145.8	102.1	238	195.0	136.5	298	244.1	170.9
59	48.3	33.8	119	97.5	68.3	179	146.6	102.7	239	195.8	137.1	299	244.9	171.5
60	49.1	34.4	120	98 3	68.8	180	147.4	103.2	240	196.6	137.7	300	245.7	172.1
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.8	00.6	61	49.4	35.9	121	97.9	71.1	181	146.4	106.4	241	195.0	141.7
2	01.6	01.2	62	50.2	36.4	122	98.7	71.7	182	147.2	107.0	242	195.8	142.2
3	02.4	01.8	63	51.0	37.0	123	99.5	72.3	183	148.1	107.6	243	196.6	142.8
4	03.2	02.4	64	51.8	37.6	124	100.3	72.9	184	148.9	108.2	244	197.4	143.4
5	04.0	02.9	65	52.6	38.2	125	101.1	73.5	185	149.7	108.7	245	198.2	144.0
6	04.9	03.5	66	53.4	38.8	126	101.9	74.1	186	150.5	109.3	246	199.0	144.6
7	05.7	04.1	67	54.2	39.4	127	102.7	74.6	187	151.3	109.9	247	199.8	145.2
8	06.5	04.7	68	55.0	40.0	128	103.6	75.2	188	152.1	110.5	248	200.6	145.8
9	07.3	05.3	69	55.8	40.6	129	104.4	75.8	189	152.9	111.1	249	201.4	146.4
10	08.1	05.9	70	56.6	41.1	130	105.2	76.4	190	153.7	111.7	250	202.3	146.9
11	08.9	06.5	71	57.4	41.7	131	106.0	77.0	191	154.5	112.3	251	203.1	147.5
12	09.7	07.1	72	58.2	42.3	132	106.8	77.6	192	155.3	112.9	252	203.9	148.1
13	10.5	07.6	73	59.1	42.9	133	107.6	78.2	193	156.1	113.4	253	204.7	148.7
14	11.3	08.2	74	59.9	43.5	134	108.4	78.8	194	156.9	114.0	254	205.5	149.3
15	12.1	08.8	75	60.7	44.1	135	109.2	79.4	195	157.8	114.6	255	206.3	149.9
16	12.9	09.4	76	61.5	44.7	136	110.0	79.9	196	158.6	115.2	256	207.1	150.5
17	13.8	10.0	77	62.3	45.3	137	110.8	80.5	197	159.4	115.8	257	207.9	151.1
18	14.6	10.6	78	63.1	45.8	138	111.6	81.0	198	160.2	116.4	258	208.7	151.6
19	15.4	11.2	79	63.9	46.4	139	112.5	81.7	199	161.0	117.0	259	209.5	152.2
20	16.2	11.8	80	64.7	47.0	140	113.3	82.3	200	161.8	117.6	260	210.3	152.8
21	17.0	12.3	81	65.5	47.6	141	114.1	82.9	201	162.6	118.1	261	211.2	153.4
22	17.8	12.9	82	66.3	48.2	142	114.9	83.5	202	163.4	118.7	262	212.0	154.0
23	18.6	13.5	83	67.1	48.8	143	115.7	84.1	203	164.2	119.3	263	212.8	154.6
24	19.4	14.1	84	68 0	49.4	144	116.5	84.6	204	165.0	119.9	264	213.6	155.2
25	20.2	14.7	85	68.8	50.0	145	117.3	85.2	205	165.8	120.5	265	214.4	155.8
26	21.0	15.3	86	69.6	50.5	146	118.1	85.8	206	166.7	121.1	266	215.2	156.4
27	21.8	15.9	87	70.4	51.1	147	118.9	86.4	207	167.5	121.7	267	216.0	156.9
28	22.7	16.5	88	71.2	51.7	148	119.7	87.0	208	168.3	122.3	268	216.8	157.5
29	23.5	17.0	89	72.0	52.3	149	120.5	87.6	209	169.1	122.8	269	217.6	158.1
30	24.3	17.6	90	72.8	52.9	150	121.4	88.2	210	169.9	123.4	270	218.4	158.7
31	25.1	18.2	91	73.6	53.5	151	122.2	88.8	211	170.7	124.0	271	219.2	159.3
32	25.9	18.8	92	74.4	54.1	152	123.0	89.3	212	171.5	124.6	272	220.1	159.9
33	26.7	19.4	93	75.2	54.7	153	123.8	89.9	213	172.3	125.2	273	220.9	160.5
34	27.5	20.0	94	76.0	55.3	154	124.6	90.5	214	173.1	125.8	274	221.7	161.1
35	28.3	20.6	95	76.9	55.8	155	125.4	91.1	215	173.9	126.4	275	222.5	161.6
36	29.1	21.2	96	77.7	56.4	156	126.2	91.7	216	174.7	127.0	276	223.3	162.2
37	29.9	21.7	97	78.5	57.0	157	127.0	92.3	217	175.6	127.5	277	224.1	162.8
38	30.7	22.3	98	79.3	57.6	158	127.8	92.9	218	176.4	128.1	278	224.9	163.4
39	31.6	22.9	99	80.1	58.2	159	128.6	93.5	219	177.2	128.7	279	225.7	164·0
40	32.4	23.5	100	80.9	58.8	160	129.4	94.0	220	178.0	129.3	280	226.5	164.6
41	33.2	24.1	101	81.7	59.4	161	130.3	94.6	221	178.8	129.9	281	227.3	165.2
42	34.0	24.7	102	82.5	60.0	162	131.1	95.2	222	179.6	130.5	282	228.1	165.8
43	34.8	25.3	103	83.3	60.5	163	131.9	95.8	223	180.4	131.1	283	229.0	166.3
44	35.6	25.9	104	84.1	61.1	164	132.7	96.4	224	181.2	131.7	284	229.8	166.9
45	36.4	26.5	105	84.9	61.7	165	133.5	97.0	225	182.0	132 3	285	230.6	167.5
46	37.2	27.0	106	85.8	62.3	166	134.3	97.6	226	182.8	132.8	286	231.4	168.1
47	38.0	27.6	107	86.6	62.9	167	135.1	98.2	227	183.6	133.4	287	232.2	168.7
48	38.8	28.2	108	87.4	63.5	168	135.9	98.7	228	184.5	134.0	288	233.0	169.3
49	39.6	28.8	109	88.2	64.1	169	136.7	99.3	229	185.3	134.6	289	233.8	169.9
50	40.5	29.4	110	89.0	64.7	170	137.5	99.9	230	186.1	135.2	290	234.6	170.5
51	41.3	30.0	111	89.8	65.2	171	138.3	100.5	231	186.9	135.8	291	235.4	171.0
52	42.1	30.6	112	90.6	65.8	172	139.2	101.1	232	187.7	136.4	292	236.2	171.6
53	42.9	31.2	113	91.4	66.4	173	140.0	101.7	233	188.5	137.0	293	237.0	172.2
54	43.7	31.7	114	92.2	67.0	174	140.8	102.3	234	189.3	137.5	294	237.9	172.8
55	44.5	32.3	115	93.0	67.6	175	141.6	102.9	235	190.1	138.1	295	238.7	173.4
56	45.3	32.9	116	93.8	68.2	176	142.4	103.5	236	190.9	138.7	296	239.5	174.0
57	46.1	33.5	117	94.7	68.8	177	143.2	104.0	237	191.7	139.3	297	240.3	174.6
58	46.9	34.1	118	95.5	69.4	178	144.0	104.6	238	192.5	139.9	298	241.1	175.2
59	47.7	34.7	119	96.3	69.9	179	144.8	105.2	239	193.4	140.5	299	241.9	175.7
60	48.5	35.3	120	97.1	70.5	180	145.6	105.8	240	194.2	141.1	300	242.7	176.3
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.8	00.6	61	48.7	36.7	121	96.6	72.8	181	144.6	108.9	241	192.5	145.0
2	01.6	01.2	62	49.5	37.3	122	97.4	73.4	182	145.4	109.5	242	193.3	145.6
3	02.4	01.8	63	50.3	37.9	123	98.2	74.0	183	146.2	110.1	243	194.1	146.2
4	03.2	02.4	64	51.1	38.5	124	99.0	74.6	184	146.9	110.7	244	194.9	146.8
5	04.0	03.0	65	51.9	39.1	125	99.8	75.2	185	147.7	111.3	245	195.7	147.4
6	04.8	03.6	66	52.7	39.7	126	100.6	75.8	186	148.5	111.9	246	196.5	148.0
7	05.6	04.2	67	53.5	40.3	127	101.4	76.4	187	149.3	112.5	247	197.3	148.6
8	06.4	04.8	68	54.3	40.9	128	102.2	77.0	188	150.1	113.1	248	198.1	149.3
9	07.2	05.4	69	55.1	41.5	129	103.0	77.6	189	150.9	113.7	249	198.9	149.9
10	08.0	06.0	70	55.9	42 1	130	103.8	78.2	190	151.7	114.3	250	199.7	150.5
11	08.8	06.6	71	56.7	42.7	131	104.6	78.8	191	152.5	114.9	251	200.5	151.1
12	09.6	07.2	72	57.5	43.3	132	105.4	79.4	192	153.3	115.5	252	201.3	151.7
13	10.4	07.8	73	58.3	43.9	133	106.2	80.0	193	154.1	116.2	253	202.1	152.3
14	11.2	08.4	74	59.1	44.5	134	107.0	80.6	194	154.9	116.8	254	202.9	152.9
15	12.0	09.0	75	59.9	45.1	135	107.8	81.2	195	155.7	117.4	255	203.7	153.5
16	12.8	09.6	76	60.7	45.7	136	108.6	81.8	196	156.5	118.0	256	204.5	154.1
17	13.6	10.2	77	61.5	46.3	137	109.4	82.4	197	157.3	118.6	257	205.2	154.7
18	14.4	10.8	78	62.3	46.9	138	110.2	83.1	198	158.1	119.2	258	206.0	155.3
19	15.2	11.4	79	63.1	47.5	139	111.0	83.7	199	158.9	119.8	259	206.8	155.9
20	16.0	12.0	80	63.9	48.1	140	111.8	84.3	200	159.7	120.4	260	207.6	156.5
21	16.8	12.6	81	64.7	48 7	141	112.6	84.9	201	160.5	121.0	261	208.4	157.1
22	17.6	13.2	82	65.5	49 3	142	113.4	85.5	202	161.3	121.6	262	209.2	157.7
23	18.4	13.8	83	66.3	50.0	143	114.2	86.1	203	162.1	122.2	263	210.0	158.3
24	19.2	14.4	84	67.1	50.6	144	115.0	86.7	204	162.9	122.8	264	210.8	158.9
25	20.0	15.0	85	67.9	51.2	145	115.8	87.3	205	163.7	123.4	265	211.6	159.5
26	20.8	15.6	86	68.7	51.8	146	116.6	87.9	206	164.5	124.0	266	212.4	160.1
27	21.6	16.2	87	69.5	52.4	147	117.4	88.5	207	165.3	124.6	267	213.2	160.7
28	22.4	16.9	88	70.3	53.0	148	118.2	89.1	208	166.1	125.2	268	214.0	161.3
29	23.2	17.5	89	71.1	53.6	149	119.0	89.7	209	166.9	125.8	269	214.8	161.9
30	24.0	18.1	90	71.9	54.2	150	119.8	90.3	210	167.7	126.4	270	215.6	162.5
31	24.8	18.7	91	72.7	54.8	151	120.6	90.9	211	168.5	127.0	271	216.4	163.1
32	25.6	19.3	92	73.5	55.4	152	121.4	91.5	212	169.3	127.6	272	217.2	163.7
33	26.4	19.9	93	74.3	56.0	153	122.2	92.1	213	170.1	128.2	273	218.0	164.3
34	27.2	20.5	94	75.1	56.6	154	123.0	92.7	214	170.9	128.8	274	218.8	164.9
35	28.0	21.1	95	75.9	57.2	155	123.8	93.3	215	171.7	129.4	275	219.6	165.5
36	28.8	21.7	96	76.7	57.8	156	124.6	93.9	216	172.5	130.0	276	220.4	166.1
37	29.5	22.3	97	77.5	58.4	157	125.4	94.5	217	173.3	130.6	277	221.2	166.7
38	30.3	22.9	98	78.3	59.0	158	126.2	95.1	218	174.1	131.2	278	222.0	167.3
39	31.1	23.5	99	79.1	59.6	159	127.0	95.7	219	174.9	131.8	279	222.8	167.9
40	31.9	24.1	100	79.9	60.2	160	127.8	96.3	220	175.7	132.4	280	223.6	168.5
41	32.7	24.7	101	80.7	60.8	161	128.6	96.9	221	176.5	133.0	281	224.4	169.1
42	33.5	25.3	102	81.5	61.4	162	129.4	97.5	222	177.3	133.6	282	225.2	169.7
43	34.3	25.9	103	82.3	62.0	163	130.2	98.1	223	178.1	134.2	283	226.0	170.3
44	35.1	26.5	104	83.1	62.6	164	131.0	98.7	224	178.9	134.8	284	226.8	170.9
45	35.9	27.1	105	83.9	63.2	165	131.8	99.3	225	179.7	135.4	285	227.6	171.5
46	36.7	27.7	106	84.7	63.8	166	132.6	99.9	226	180.5	136.0	286	228.4	172.1
47	37.5	28.3	107	85.5	64.4	167	133.4	100.5	227	181.3	136.6	287	229.2	172.7
48	38.3	28.9	108	86.3	65.0	168	134.2	101.1	228	182.1	137.2	288	230.0	173.3
49	39.1	29.5	109	87.1	65.6	169	135.0	101.7	229	182.9	137.8	289	230.8	173.9
50	39.9	30.1	110	87.8	66 2	170	135.8	102.3	230	183.7	138.4	290	231.6	174.5
51	40.7	30.7	111	88.6	66.8	171	136.6	102.9	231	184.5	139.0	291	232.4	175.1
52	41.5	31.3	112	89.4	67.4	172	137.4	103.5	232	185.3	139.6	292	233.2	175.7
53	42.3	31.9	113	90.2	68.0	173	138.2	104.1	233	186.1	140.2	293	234 0	176.3
54	43.1	32.5	114	91.0	68.6	174	139.0	104.7	234	186.9	140.8	294	234.8	176.9
55	43.9	33.1	115	91.8	69.2	175	139.8	105 3	235	187.7	141.4	295	235.6	177.5
56	44.7	33.7	116	92.6	69.8	176	140.6	105.9	236	188.5	142.0	296	236.4	178.1
57	45.5	34.3	117	93.4	70.4	177	141.4	106.5	237	189.3	142.6	297	237.2	178.7
58	46.3	34.9	118	94.2	71.0	178	142.2	107.1	238	190.1	143.2	298	238.0	179.3
59	47.1	35.5	119	95.0	71.6	179	143.0	107.7	239	190.9	143.8	299	238.8	179.9
60	47.9	36.1	120	95.8	72.2	180	143.8	108.3	240	191.7	144.4	300	239.6	180.5
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.8	00.6	61	48.1	37.6	121	95.8	74.5	181	142.6	111.4	241	189.9	148.4
2	01.6	01.2	62	48.9	38.2	122	96.1	75.1	182	143.4	112.1	242	190.7	149.0
3	02.4	01.8	63	49.6	38.8	123	96.9	75.7	183	144.2	112.7	243	191.5	149.6
4	03.2	02.5	64	50.4	39.4	124	97.7	76.3	184	145.0	113.3	244	192.3	150.2
5	03.9	03.1	65	51.2	40.0	125	98.5	77.0	185	145.8	113.9	245	193.1	150.8
6	04.7	03.7	66	52.0	40.6	126	99.3	77.6	186	146.6	114.5	246	193.9	151.5
7	05.5	04.3	67	52.8	41.2	127	100.1	78.2	187	147.4	115.1	247	194.6	152.1
8	06.3	04.9	68	53.6	41.9	128	100.9	78.8	188	148.1	115.7	248	195.4	152.7
9	07.1	05.5	69	54.4	42.5	129	101.7	79.4	189	148.9	116.4	249	196.2	153.3
10	07.9	06.2	70	55.2	43.1	130	102.4	80.0	190	149.7	117.0	250	197.0	153.9
11	08.7	06.8	71	55.9	43.7	131	103.2	80.7	191	150.5	117.6	251	197.8	154.5
12	09.5	07.4	72	56.7	44.3	132	104.0	81.3	192	151.3	118.2	252	198.6	155.1
13	10.2	08.0	73	57.5	44.9	133	104.8	81.9	193	152.1	118.8	253	199.4	155.8
14	11.0	08.6	74	58.3	45.6	134	105.6	82.5	194	152.9	119.4	254	200.2	156.4
15	11.8	09.2	75	59.1	46.2	135	106.4	83.1	195	153.7	120.1	255	200.9	157.0
16	12.6	09.9	76	59.9	46.8	136	107.2	83.7	196	154.5	120.7	256	201.7	157.6
17	13.4	10.5	77	60.7	47.4	137	108.0	84.3	197	155.2	121.3	257	202.5	158.2
18	14.2	11.1	78	61.5	48.0	138	108.7	85.0	198	156.0	121.9	258	203.3	158.8
19	15.0	11.7	79	62.3	48.6	139	109.5	85.6	199	156.8	122.5	259	204.1	159.5
20	15.8	12.3	80	63.0	49.3	140	110.3	86.2	200	157.6	123.1	260	204.9	160.1
21	16.5	12.9	81	63.8	49.9	141	111.1	86.8	201	158.4	123.7	261	205.7	160.7
22	17.3	13.5	82	64.6	50.5	142	111.9	87.4	202	159.2	124.4	262	206.5	161.3
23	18.1	14.2	83	65.4	51.1	143	112.7	88.0	203	160.0	125.0	263	207.2	161.9
24	18.9	14.8	84	66.2	51.7	144	113.5	88.7	204	160.8	125.6	264	208.0	162.5
25	19.7	15.4	85	67.0	52.3	145	114.3	89.3	205	161.5	126.2	265	208.8	163.2
26	20.5	16.0	86	67.8	52.9	146	115.0	89.9	206	162.3	126.8	266	209.6	163.8
27	21.3	16.6	87	68.6	53.6	147	115.8	90.5	207	163.1	127.4	267	210.4	164.4
28	22.1	17.2	88	69.3	54.2	148	116.6	91.1	208	163.9	128.1	268	211.2	165.0
29	22.9	17.9	89	70.1	54.8	149	117.4	91.7	209	164.7	128.7	269	212.0	165.6
30	23.6	18.5	90	70.9	55.4	150	118.2	92.3	210	165.5	129.3	270	212.8	166.2
31	24.4	19.1	91	71.7	56.0	151	119.0	93.0	211	166.3	129.9	271	213.6	166.8
32	25.2	19.7	92	72.5	56.6	152	119.8	93.6	212	167.1	130.5	272	214.3	167.5
33	26.0	20.3	93	73.3	57.3	153	120.6	94.2	213	167.8	131.1	273	215.1	168.1
34	26.8	20.9	94	74.1	57.9	154	121.4	94.8	214	168.6	131.8	274	215.9	168.7
35	27.6	21.5	95	74.9	58.5	155	122.1	95.4	215	169.4	132.4	275	216.7	169.3
36	28.4	22.2	96	75.6	59.1	156	122.9	96.0	216	170.2	133.0	276	217.5	169.9
37	29.2	22.8	97	76.4	59.7	157	123.7	96.7	217	171.0	133.6	277	218.3	170.5
38	29.9	23.4	98	77.2	60.3	158	124.5	97.3	218	171.8	134.2	278	219.1	171.2
39	30.7	24.0	99	78.0	61.0	159	125.3	97.9	219	172.6	134.8	279	219.9	171.8
40	31.5	24.6	100	78.8	61.6	160	126.1	98.5	220	173.4	135.4	280	220.6	172.4
41	32.3	25.2	101	79.6	62.2	161	126.9	99.1	221	174.2	136.1	281	221.4	173.0
42	33.1	25.9	102	80.4	62.8	162	127.7	99.7	222	174.9	136.7	282	222.2	173.6
43	33.9	26.5	103	81.2	63.4	163	128.4	100.4	223	175.7	137.3	283	223.0	174.2
44	34.7	27.1	104	82.0	64.0	164	129.2	101.0	224	176.5	137.9	284	223.8	174.8
45	35.5	27.7	105	82.7	64.6	165	130.0	101.6	225	177.3	138.5	285	224.6	175.5
46	36.2	28.3	106	83.5	65.3	166	130.8	102.2	226	178.1	139.1	286	225.4	176.1
47	37.0	28.9	107	84.3	65.9	167	131.6	102.8	227	178.9	139.8	287	226.2	176.7
48	37.8	29.6	108	85.1	66.5	168	132.4	103.4	228	179.7	140.4	288	226.9	177.3
49	38.6	30.2	109	85.9	67.1	169	133.2	104.0	229	180.5	141.0	289	227.7	177.9
50	39.4	30.8	110	86.7	67.7	170	134.0	104.7	230	181.2	141.6	290	228.5	178.5
51	40.2	31.4	111	87.5	68.3	171	134.7	105.3	231	182.0	142.2	291	229.3	179.2
52	41.0	32.0	112	88.3	69.0	172	135.5	105.9	232	182.8	142.8	292	230.1	179.8
53	41.8	32.6	113	89.0	69.6	173	136.3	106.5	233	183.6	143.4	293	230.9	180.4
54	42.6	33.2	114	89.8	70.2	174	137.1	107.1	234	184.4	144.1	294	231.7	181.0
55	43.3	33.9	115	90.6	70.8	175	137.9	107.7	235	185.2	144.7	295	232.5	181.6
56	44.1	34.5	116	91.4	71.4	176	138.7	108.4	236	186.0	145.3	296	233.3	182.2
57	44.9	35.1	117	92.2	72.0	177	139.5	109.0	237	186.8	145.9	297	234.0	182.9
58	45.7	35.7	118	93.0	72.6	178	140.3	109.6	238	187.5	146.5	298	234.8	183.5
59	46.5	36.3	119	93.8	73.3	179	141.1	110.2	239	188.3	147.1	299	235.6	184.1
60	47.3	36.9	120	94.6	73.9	180	141.8	110.8	240	189.1	147.8	300	236.4	184.7
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.8	00.6	61	47.4	38.4	121	94.0	76.1	181	140.7	113.9	241	187.3	151.7
2	01.6	01.3	62	48.2	39.0	122	94.8	76.8	182	141.4	114.5	242	188.1	152.3
3	02.3	01.9	63	49.0	39.6	123	95.6	77.4	183	142.2	115.2	243	188.8	152.9
4	03.1	02.5	64	49.7	40.3	124	96.4	78.0	184	143.0	115.8	244	189.6	153.6
5	03.9	03.1	65	50.5	40.9	125	97.1	78.7	185	143.8	116.4	245	190.4	154.2
6	04.7	03.8	66	51.3	41.5	126	97.9	79.3	186	144.5	117.1	246	191.2	154.8
7	05.4	04.4	67	52.1	42.2	127	98.7	79.9	187	145.3	117.7	247	192.0	155.4
8	06.2	05.0	68	52.8	42.8	128	99.5	80.6	188	146.1	118.3	248	192.7	156.1
9	07.0	05 7	69	53.6	43.4	129	100.3	81.2	189	146.9	118.9	249	193.5	156.7
10	07.8	06.3	70	54 4	44.1	130	101.0	81.8	190	147.7	119.6	250	194.3	157.3
11	08.5	06.9	71	55.2	44.7	131	101.8	82.4	191	148.4	120.2	251	195.1	158.0
12	09.3	07.6	72	56.0	45.3	132	102.6	83.1	192	149.2	120.8	252	195.8	158.6
13	10.1	08.2	73	56.7	45.9	133	103.4	83.7	193	150.0	121.5	253	196.6	159.2
14	10.9	08.8	74	57.5	46.6	134	104.1	84.3	194	150.8	122.1	254	197.4	159.8
15	11.7	09.4	75	58.3	47.2	135	104.9	85.0	195	151.5	122.7	255	198.2	160.5
16	12.4	10.1	76	59.1	47.8	136	105.7	85.6	196	152.3	123.3	256	198.9	161.1
17	13.2	10.7	77	59.8	48.5	137	106.5	86.2	197	153.1	124.0	257	199.7	161.7
18	14.0	11.3	78	60.6	49.1	138	107.2	86.8	198	153.9	124.6	258	200.5	162.4
19	14.8	12.0	79	61.4	49 7	139	108.0	87.5	199	154.7	125.2	259	201.3	163.0
20	15.5	12.6	80	62.2	50.3	140	108.8	88.1	200	155.4	125.9	260	202.1	163.6
21	16.3	13.2	81	62.9	51.0	141	109.6	88.7	201	156.2	126.5	261	202.8	164.3
22	17.1	13.8	82	63.7	51.6	142	110.4	89.4	202	157.0	127.1	262	203.6	164.9
23	17.9	14.5	83	64.5	52.2	143	111.1	90.0	203	157.8	127.8	263	204.4	165.5
24	18.7	15.1	84	65.3	52.9	144	111.9	90.6	204	158.5	128.4	264	205.2	166.1
25	19.4	15.7	85	66.1	53.5	145	112.7	91.3	205	159.3	129.0	265	205.9	166.8
26	20.2	16.4	86	66.8	54.1	146	113.5	91.9	206	160.1	129.6	266	206.7	167.4
27	21.0	17.0	87	67.6	54.8	147	114.2	92.5	207	160.9	130.3	267	207.5	168.0
28	21.8	17.6	88	68.4	55.4	148	115.0	93.1	208	161.6	130.9	268	208.3	168.7
29	22.5	18.3	89	69.2	56.0	149	115.8	93.8	209	162.4	131.5	269	209.1	169.3
30	23.3	18.9	90	69.9	56 6	150	116.6	94 4	210	163.2	132.2	270	209.8	169.9
31	24.1	19.5	91	70.7	57.3	151	117.3	95.0	211	164.0	132.8	271	210.6	170.5
32	24.9	20.1	92	71.5	57.9	152	118 1	95.7	212	164.8	133.4	272	211.4	171.2
33	25.6	20.8	93	72.3	58.5	153	118.9	96.3	213	165.5	134.0	273	212.2	171.8
34	26.4	21.4	94	73.1	59.2	154	119.7	96.9	214	166.3	134.7	274	212.9	172.4
35	27.2	22.0	95	73.8	59.8	155	120.5	97.5	215	167.1	135.3	275	213.7	173.1
36	28.0	22.7	96	74.6	60.4	156	121.2	98.2	216	167.9	135.9	276	214.5	173.7
37	28.8	23.3	97	75.4	61.0	157	122.0	98 8	217	168.6	136.6	277	215.3	174.3
38	29.5	23.9	98	76.2	61.7	158	122.8	99.4	218	169.4	137.2	278	216.0	175.0
39	30.3	24.5	99	76.9	62.3	159	123.6	100.1	219	170.2	137.8	279	216.8	175.6
40	31.1	25 2	100	77.7	62.9	160	124.3	100.7	220	171.0	138.5	280	217.6	176.2
41	31.9	25.8	101	78.5	63.6	161	125.1	101.3	221	171.7	139.1	281	218.4	176.8
42	32.6	26.4	102	79.3	64.2	162	125.9	101.9	222	172.5	139.7	282	219.2	177.5
43	33.4	27.1	103	80.0	64.8	163	126.7	102.6	223	173.3	140.3	283	219.9	178.1
44	34.1	27.7	104	80.8	65.4	164	127.5	103.2	224	174.1	141.0	284	220.7	178.7
45	35.0	28.3	105	81.6	66.1	165	128.2	103.8	225	174.9	141.6	285	221.5	179.4
46	35.7	28.9	106	82.4	66.7	166	129.0	104.5	226	175.6	142.2	286	222.3	180.0
47	36.5	29.6	107	83.2	67.3	167	129.8	105.1	227	176.4	142.9	287	223.0	180.6
48	37.3	30.2	108	83.9	68.0	168	130.6	105.7	228	177.2	143.5	288	223.8	181.2
49	38.1	30.8	109	84.7	68.6	169	131.3	106.4	229	178.0	144.1	289	224.6	181.9
50	38.9	31.5	110	85.5	69.2	170	132.1	107.0	230	178.7	144.7	290	225.4	182.5
51	39.6	32.1	111	86.3	69.9	171	132.9	107.6	231	179.5	145.4	291	226.1	183.1
52	40.4	32.7	112	87.0	70.5	172	133.7	108.2	232	180.3	146.0	292	226.9	183.8
53	41.2	33.4	113	87.8	71.1	173	134.4	108.9	233	181.1	146.6	293	227.7	184.4
54	42.0	34.0	114	88.6	71.7	174	135.2	109.5	234	181.9	147.3	294	228.5	185.0
55	42.7	34.6	115	89.4	72.4	175	136.0	110.1	235	182.6	147.9	295	229.3	185.6
56	43.5	35.2	116	90.1	73 0	176	136.8	110.8	236	183.4	148.5	296	230.0	186.3
57	44.3	35.9	117	90.9	73.6	177	137.6	111.4	237	184.2	149.1	297	230.8	186.9
58	45.1	36.5	118	91.7	74.3	178	138.3	112.0	238	185.0	149.8	298	231.6	187.5
59	45.9	37.1	119	92.5	74.9	179	139.1	112.6	239	185.7	150.4	299	232.4	188.2
60	46.6	37.8	120	93.3	75.5	180	139 9	113.3	240	186.5	151.0	300	233.1	188.8
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.8	00.6	61	46.7	39.2	121	92.7	77.8	181	138.7	116.3	241	184.6	154.9
2	01.5	01.3	62	47.5	39.9	122	93.5	78.4	182	139.4	117.0	242	185.4	155.6
3	02.3	01.9	63	48.3	40.5	123	94.2	79.1	183	140.2	117.6	243	186.1	156.2
4	03.1	02.6	64	49.0	41.1	124	95.0	79.7	184	141.0	118.3	244	186.9	156.8
5	03.8	03.2	65	49.8	41.8	125	95.8	80.3	185	141.7	118.9	245	187.7	157.5
6	04.6	03.9	66	50.6	42.4	126	96.5	81.0	186	142.5	119.6	246	188.4	158.1
7	05.4	04.5	67	51.3	43.1	127	97.3	81.6	187	143.3	120.2	247	189.2	158.8
8	06.1	05.1	68	52.1	43.7	128	98.1	82.3	188	144.0	120.8	248	190.0	159.4
9	06.9	05.8	69	52.9	44.4	129	98 8	82.9	189	144.8	121.5	249	190.7	160.1
10	07.7	06.4	70	53.6	45.0	130	99.6	83.6	190	145.5	122.1	250	191.5	160.7
11	08.4	07.1	71	54.4	45.6	131	100.4	84.2	191	146.3	122.8	251	192.3	161.3
12	09.2	07.7	72	55.2	46.3	132	101.1	84.8	192	147.1	123.4	252	193 0	162.0
13	10.0	08.4	73	55.9	46.9	133	101.9	85.5	193	147.8	124.1	253	193.8	162.6
14	10.7	09.0	74	56.7	47.6	134	102.6	86.1	194	148.6	124.7	254	194.6	163.3
15	11.5	09.6	75	57.5	48.2	135	103.4	86.8	195	149.4	125.3	255	195.3	163.9
16	12.3	10.3	76	58.2	48.9	136	104.2	87.4	196	150.1	126.0	256	196.1	164.6
17	13.0	10.9	77	59.0	49.5	137	104.9	88.1	197	150.9	126.6	257	196.9	165.2
18	13.8	11.6	78	59.8	50.1	138	105.7	88.7	198	151.7	127.3	258	197.6	165.8
19	14.6	12.2	79	60.5	50.8	139	106.5	89.3	199	152.4	127.9	259	198.4	166.5
20	15.3	12.9	80	61.3	51.4	140	107.2	90.0	200	153.2	128.6	260	199.2	167.1
21	16.1	13.5	81	62.0	52.1	141	108.0	90.6	201	154.0	129.2	261	199.9	167.8
22	16.9	14.1	82	62.8	52.7	142	108.8	91.3	202	154.7	129.8	262	200.7	168.4
23	17.6	14.8	83	63.6	53.4	143	109.5	91.9	203	155.5	130.5	263	201.5	169.1
24	18.4	15.4	84	64.3	54.0	144	110.3	92.6	204	156.3	131.1	264	202.2	169.7
25	19.2	16.1	85	65.1	54.6	145	111.1	93.2	205	157.0	131.8	265	203.0	170.3
26	19.9	16.7	86	65.9	55.3	146	111.8	93.8	206	157.8	132.4	266	203.8	171.0
27	20.7	17.4	87	66.6	55.9	147	112.6	94.5	207	158.6	133.1	267	204.5	171.6
28	21.4	18.0	88	67.4	56.6	148	113.4	95.1	208	159.3	133.7	268	205.3	172.3
29	22.2	18.6	89	68.2	57.2	149	114.1	95.8	209	160.1	134.3	269	206.1	172.9
30	23.0	19.3	90	68.9	57.9	150	114.9	96.4	210	160.9	135.0	270	206.8	173.6
31	23.7	19.9	91	69.7	58.5	151	115.7	97.1	211	161.6	135.6	271	207.6	174.2
32	24.5	20.6	92	70.5	59.1	152	116.4	97.7	212	162.4	136.3	272	208.4	174.8
33	25.3	21.2	93	71.2	59.8	153	117.2	98.3	213	163.2	136.9	273	209.1	175.5
34	26.0	21.9	94	72.0	60.4	154	118.0	99.0	214	163.9	137.6	274	209.9	176.1
35	26.8	22.5	95	72.8	61.1	155	118.7	99.6	215	164.7	138.2	275	210.7	176.8
36	27.6	23.1	96	73.5	61.7	156	119.5	100.3	216	165.5	138.8	276	211.4	177.4
37	28.3	23.8	97	74.3	62.4	157	120.3	100.9	217	166.2	139.5	277	212.2	178.1
38	29.1	24.4	98	75.1	63.0	158	121.0	101.6	218	167.0	140.1	278	213.0	178.7
39	29.9	25.1	99	75.8	63.6	159	121.8	102.2	219	167.8	140.8	279	213.7	179.3
40	30.6	25.7	100	76.6	64.3	160	122.6	102.8	220	168.5	141.4	280	214.5	180.0
41	31.4	26.4	101	77.4	64.9	161	123.3	103.5	221	169.3	142.1	281	215.3	180.6
42	32.2	27.0	102	78.1	65.6	162	124.1	104.1	222	170.1	142.7	282	216.0	181.3
43	32.9	27.6	103	78.9	66.2	163	124.9	104.8	223	170.8	143.3	283	216.8	181.9
44	33.7	28.3	104	79.7	66.8	164	125.6	105.4	224	171.6	144.0	284	217.6	182.6
45	34.5	28.9	105	80.4	67.5	165	126.4	106.1	225	172.4	144.6	285	218.3	183.2
46	35.2	29.6	106	81.2	68.1	166	127.2	106.7	226	173.1	145.3	286	219.1	183.8
47	36.0	30.2	107	82.0	68.8	167	127.9	107.3	227	173.9	145.9	287	219.9	184.5
48	36.8	30.9	108	82.7	69.4	168	128.7	108.0	228	174.7	146.6	288	220.6	185.1
49	37.5	31.5	109	83.5	70.1	169	129.5	108.6	229	175.4	147.2	289	221.4	185.8
50	38.3	32.1	110	84.3	70.7	170	130.2	109.3	230	176.2	147.8	290	222.2	186.4
51	39.1	32.8	111	85.0	71.3	171	131.0	109.9	231	177.0	148.5	291	222.9	187.1
52	39.8	33.4	112	85.8	72.0	172	131.8	110.6	232	177.7	149.1	292	223.7	187.7
53	40.6	34.1	113	86.6	72.6	173	132.5	111.2	233	178.5	149.8	293	224.5	188.3
54	41.4	34.7	114	87.3	73.3	174	133.3	111.8	234	179.3	150.4	294	225.2	189.0
55	42.1	35.4	115	88.1	73.9	175	134.1	112.5	235	180.0	151.1	295	226.0	189.6
56	42.9	36.0	116	88.9	74.6	176	134.8	113.1	236	180.8	151.7	296	226.7	190.3
57	43.7	36.6	117	89.6	75.2	177	135.6	113.8	237	181.6	152.3	297	227.5	190.9
58	44.4	37.3	118	90.4	75.8	178	136.4	114.4	238	182.3	153.0	298	228.3	191.6
59	45.2	37.9	119	91.2	76.5	179	137.1	115.1	239	183.1	153.6	299	229.0	192.2
60	16.0	38.6	120	91.9	77.1	180	137.9	115.7	240	183.9	154.3	300	229.8	192.8
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.8	00.7	61	46.0	40.0	121	91.3	79.4	181	136.6	118.7	241	181.9	158.1
2	01.5	01.3	62	46.8	40.7	122	92.1	80.0	182	137.4	119.4	242	182.6	158.8
3	02.3	02.0	63	47.5	41.3	123	92.8	80.7	183	138.1	120.1	243	183.4	159.4
4	03.0	02.6	64	48.3	42.0	124	93.6	81.4	184	138.9	120.7	244	184.1	160.1
5	03.8	03.3	65	49.1	42.6	125	94.3	82.0	185	139.6	121.4	245	184.9	160.7
6	04.5	03.9	66	49.8	43.3	126	95.1	82.7	186	140.4	122.0	246	185.7	161.4
7	05.3	04.6	67	50.6	44.0	127	95.8	83.3	187	141.1	122.7	247	186.4	162.0
8	06.0	05.2	68	51.3	44.6	128	96.6	84.0	188	141.9	123.3	248	187.2	162.7
9	06.8	05.9	69	52.1	45.3	129	97.4	84.6	189	142.6	124.0	249	187.9	163.4
10	07.5	06.6	70	52.8	45.9	130	98.1	85.3	190	143.4	124.7	250	188.7	164.0
11	08.3	07.2	71	53.6	46.6	131	98.9	85.9	191	144.1	125.3	251	189.4	164.7
12	09.1	07.9	72	54.3	47.2	132	99.6	86.6	192	144.9	126.0	252	190.2	165.3
13	09.8	08.5	73	55.1	47.9	133	100.4	87.3	193	145.7	126.6	253	190.9	166.0
14	10.6	09.2	74	55.8	48.5	134	101.1	87.9	194	146.4	127.3	254	191.7	166.6
15	11.3	09.8	75	56.6	49.2	135	101.9	88.6	195	147.2	127.9	255	192.5	167.3
16	12.1	10.5	76	57.4	49.9	136	102.6	89.2	196	147.9	128.6	256	193.2	168.0
17	12.8	11.2	77	58.1	50.5	137	103.4	89.9	197	148.7	129.2	257	194.0	168.6
18	13.6	11.8	78	58.9	51.2	138	104.1	90.5	198	149.4	129.9	258	194.7	169.3
19	14.3	12.5	79	59.6	51.8	139	104.9	91.2	199	150.2	130.6	259	195.5	169.9
20	15.1	13.1	80	60.4	52.5	140	105.7	91.8	200	150.9	131.2	260	196.2	170.6
21	15.8	13.8	81	61.1	53.1	141	106.4	92.5	201	151.7	131.9	261	197.0	171.2
22	16.6	14.4	82	61.9	53.8	142	107.2	93.2	202	152.5	132.5	262	197.7	171.9
23	17.4	15.1	83	62.6	54.5	143	107.9	93.8	203	153.2	133.2	263	198.5	172.5
24	18.1	15.7	84	63.4	55.1	144	108.7	94.5	204	154.0	133.8	264	199.2	173.2
25	18.9	16.4	85	64.2	55.8	145	109.4	95.1	205	154.7	134.5	265	200.0	173.9
26	19.6	17.1	86	64.9	56.4	146	110.2	95.8	206	155.5	135.1	266	200.8	174.5
27	20.4	17.7	87	65.7	57.1	147	110.9	96.4	207	156.2	135.8	267	201.5	175.2
28	21.1	18.4	88	66.4	57·7	148	111 7	97.1	208	157.0	136.5	268	202.3	175.8
29	21.9	19.0	89	67.2	58.4	149	112.5	97.8	209	157.7	137.1	269	203.0	176.5
30	22.6	19.7	90	67.9	59.0	150	113.2	98.4	210	158.5	137.8	270	203.8	177.1
31	23.4	20.3	91	68.7	59.7	151	114.0	99.1	211	159.2	138.4	271	204.5	177 8
32	24.2	21.0	92	69.4	60.4	152	114.7	99.7	212	160.0	139.1	272	205.3	178.4
33	24.9	21.6	93	70.2	61.0	153	115 5	100.4	213	160.8	139.7	273	206.0	179.1
34	25.7	22.3	94	70.9	61.7	154	116.2	101.0	214	161.5	140.4	274	206.8	179.8
35	26.4	23.0	95	71.7	62.3	155	117.0	101.7	215	162.3	141.1	275	207.5	180.4
36	27.2	23.6	96	72.5	63.0	156	117.7	102.3	216	163.0	141.7	276	208.3	181.1
37	27.9	24.3	97	73.2	63.6	157	118.5	103.0	217	163.8	142.4	277	209.1	181.7
38	28.7	24.9	98	74.0	64.3	158	119.2	103.7	218	164.5	143.0	278	209.8	182.4
39	29.4	25.6	99	74.7	64.9	159	120.0	104.3	219	165.3	143.7	279	210.6	183.0
40	30.2	26.2	100	75.5	65.6	160	120.8	105.0	220	166.0	144.3	280	211.3	183.7
41	30.9	26.9	101	76.2	66.3	161	121.5	105.6	221	166.8	145.0	281	212.1	184.4
42	31.7	27.6	102	77.0	66.9	162	122.3	106.3	222	167.5	145.6	282	212.8	185.0
43	32.5	28.2	103	77.7	67.6	163	123.0	106.9	223	168.3	146.3	283	213.6	185.7
44	33.2	28.9	104	78.5	68.2	164	123.8	107.6	224	169.1	147.0	284	214.3	186.3
45	34.0	29.5	105	79.2	68.9	165	124 5	108.2	225	169.8	147.6	285	215.1	187.0
46	34.7	30.2	106	80.0	69.5	166	125.3	108.9	226	170.6	148.3	286	215.8	187.6
47	35.5	30.8	107	80.8	70.2	167	126.0	109.6	227	171.3	148.9	287	216.6	188.3
48	36.2	31.5	108	81.5	70.9	168	126.8	110.2	228	172.1	149.6	288	217.4	188.9
49	37.0	32.1	109	82.3	71.5	169	127.5	110.9	229	172.8	150 2	289	218.1	189.6
50	37.7	32.8	110	83.0	72.2	170	128.3	111.5	230	173 6	150.9	290	218.9	190.3
51	38.5	33.5	111	83.8	72.8	171	129.1	112.2	231	174.3	151.5	291	219.6	190.9
52	39.2	34.1	112	84.5	73.5	172	129.8	112.8	232	175.1	152.2	292	220.4	191.6
53	40.0	34.8	113	85.3	74.1	173	130.6	113.5	233	175.8	152.9	293	221.1	192.2
54	40.8	35.4	114	86.0	74.8	174	131.3	114.2	234	176.6	153.5	294	221.9	192.9
55	41.5	36.1	115	86.8	75.4	175	132.1	114.8	235	177.4	154.2	295	222.6	193.5
56	42.3	36.7	116	87.5	76.1	176	132 8	115.5	236	178.1	154.8	296	223.4	194.2
57	43.0	37.4	117	88.3	76.8	177	133.6	116.1	237	178.9	155.5	297	224.1	194.8
58	43.8	38.1	118	89.1	77.4	178	134 3	116.8	238	179.6	156.1	298	224.9	195.5
59	44.5	38.7	119	89.8	78.1	179	135.1	117.4	239	180.4	156.8	299	225.7	196.2
60	45.3	39.4	120	90.6	78.7	180	135.8	118.1	240	181.1	157.5	300	226.4	196.8
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.7	00.7	61	45.3	40.8	121	89.9	81.0	181	134.5	121.1	241	179.1	161.3
2	01.5	01.3	62	46.1	41.5	122	90.7	81.6	182	135.3	121.8	242	179.8	161.9
3	02.2	02.0	63	46.8	42.2	123	91.4	82.3	183	136.0	122.5	243	180.6	162.6
4	03.0	02.7	64	47.6	42.8	124	92.1	83.0	184	136.7	123.1	244	181.3	163.3
5	03.7	03.3	65	48.3	43.5	125	92.9	83.6	185	137.5	123.8	245	182.1	163.9
6	04.5	04.0	66	49.0	44.2	126	93.6	84.3	186	138.2	124.5	246	182.8	164.6
7	05.2	04.7	67	49.8	44.8	127	94.4	85.0	187	139.0	125.1	247	183.6	165.3
8	05.9	05.4	68	50.5	45.5	128	95.1	85.6	188	139.7	125.8	248	184.3	165.9
9	06.7	06.0	69	51.3	46.2	129	95.9	86.3	189	140.5	126.5	249	185.0	166.6
10	**07.4**	**06.7**	**70**	**52.0**	**46.8**	**130**	**96.6**	**87.0**	**190**	**141.2**	**127.1**	**250**	**185.8**	**167.3**
11	08.2	07.4	71	52.8	47.5	131	97.4	87.7	191	141.9	127.8	251	186.5	168.0
12	08.9	08.0	72	53.5	48.2	132	98.1	88.3	192	142.7	128.5	252	187.3	168.6
13	09.7	08.7	73	54.2	48.8	133	98.8	89.0	193	143.4	129.1	253	188.0	169.3
14	10.4	09.4	74	55.0	49.5	134	99.6	89.7	194	144.2	129.8	254	188.8	170.0
15	11.1	10.0	75	55.7	50.2	135	100.3	90.3	195	144.9	130.5	255	189.5	170.6
16	11.9	10.7	76	56.5	50.9	136	101.1	91.0	196	145.7	131.1	256	190.2	171.3
17	12.6	11.4	77	57.2	51.5	137	101.8	91.7	197	146.4	131.8	257	191.0	172.0
18	13.4	12.0	78	58.0	52.2	138	102.6	92.3	198	147.1	132.5	258	191.7	172.6
19	14.1	12.7	79	58.7	52.9	139	103.3	93.0	199	147.9	133.2	259	192.5	173.3
20	**14.9**	**13.4**	**80**	**59.5**	**53.5**	**140**	**104.0**	**93.7**	**200**	**148.6**	**133.8**	**260**	**193.2**	**174.0**
21	15.6	14.1	81	60.2	54.2	141	104.8	94.3	201	149.4	134.5	261	194.0	174.6
22	16.3	14.7	82	60.9	54.9	142	105.5	95.0	202	150.1	135.2	262	194.7	175.3
23	17.1	15.4	83	61.7	55.5	143	106.3	95.7	203	150.9	135.8	263	195.4	176.0
24	17.8	16.1	84	62.4	56.2	144	107.0	96.4	204	151.6	136.5	264	196.2	176.7
25	18.6	16.7	85	63.2	56.9	145	107.8	97.0	205	152.3	137.2	265	196.9	177.3
26	19.3	17.4	86	63.9	57.5	146	108.5	97.7	206	153.1	137.8	266	197.7	178.0
27	20.1	18.1	87	64.7	58.2	147	109.2	98.4	207	153.8	138.5	267	198.4	178.7
28	20.8	18.7	88	65.4	58.9	148	110.0	99.0	208	154.6	139.2	268	199.2	179.3
29	21.6	19.4	89	66.1	59.6	149	110.7	99.7	209	155.3	139.8	269	199.9	180.0
30	**22.3**	**20.1**	**90**	**66.9**	**60.2**	**150**	**111.5**	**100.4**	**210**	**156.1**	**140.5**	**270**	**200.6**	**180.7**
31	23.0	20.7	91	67.6	60.9	151	112.2	101.0	211	156.8	141.2	271	201.4	181.3
32	23.8	21.4	92	68.4	61.6	152	113.0	101.7	212	157.5	141.9	272	202.1	182.0
33	24.5	22.1	93	69.1	62.2	153	113.7	102.4	213	158.3	142.5	273	202.9	182.7
34	25.3	22.8	94	69.9	62.9	154	114.4	103.0	214	159.0	143.2	274	203.6	183.3
35	26.0	23.4	95	70.6	63.6	155	115.2	103.7	215	159.8	143.9	275	204.4	184.0
36	26.8	24.1	96	71.3	64.2	156	115.9	104.4	216	160.5	144.5	276	205.1	184.7
37	27.5	24.8	97	72.1	64.9	157	116.7	105.1	217	161.3	145.2	277	205.9	185.3
38	28.2	25.4	98	72.8	65.6	158	117.4	105.7	218	162.0	145.9	278	206.6	186.0
39	29.0	26.1	99	73.6	66.2	159	118.2	106.4	219	162.7	146.5	279	207.3	186.7
40	**29.7**	**26.8**	**100**	**74.3**	**66.9**	**160**	**118.9**	**107.1**	**220**	**163.5**	**147.2**	**280**	**208.1**	**187.4**
41	30.5	27.4	101	75.1	67.6	161	119.6	107.7	221	164.2	147.9	281	208.8	188.0
42	31.2	28.1	102	75.8	68.3	162	120.4	108.4	222	165.0	148.5	282	209.6	188.7
43	32.0	28.8	103	76.5	68.9	163	121.1	109.1	223	165.7	149.2	283	210.3	189.4
44	32.7	29.4	104	77.3	69.6	164	121.9	109.7	224	166.5	149.9	284	211.1	190.0
45	33.4	30.1	105	78.0	70.3	165	122.6	110.4	225	167.2	150.6	285	211.8	190.7
46	34.2	30.8	106	78.8	70.9	166	123.4	111.1	226	168.0	151.2	286	212.5	191.4
47	34.9	31.4	107	79.5	71.6	167	124.1	111.7	227	168.7	151.9	287	213.3	192.0
48	35.7	32.1	108	80.3	72.3	168	124.8	112.4	228	169.4	152.6	288	214.0	192.7
49	36.4	32.8	109	81.0	72.9	169	125.6	113.1	229	170.2	153.2	289	214.8	193.4
50	**37.2**	**33.5**	**110**	**81.7**	**73.6**	**170**	**126.3**	**113.8**	**230**	**170.9**	**153.9**	**290**	**215.5**	**194.0**
51	37.9	34.1	111	82.5	74.3	171	127.1	114.4	231	171.7	154.6	291	216.3	194.7
52	38.6	34.8	112	83.2	74.9	172	127.8	115.1	232	172.4	155.2	292	217.0	195.4
53	39.4	35.5	113	84.0	75.6	173	128.6	115.8	233	173.2	155.9	293	217.7	196.1
54	40.1	36.1	114	84.7	76.3	174	129.3	116 4	234	173.9	156.6	294	218.5	196.7
55	40.9	36.8	115	85.5	77.0	175	130.1	117.1	235	174.6	157.2	295	219.2	197.4
56	41.6	37.5	116	86.2	77.6	176	130.8	117.8	236	175.4	157.9	296	220.0	198.1
57	42.4	38.1	117	86.9	78.3	177	131.5	118.4	237	176.1	158.6	297	220.7	198.7
58	43.1	38.8	118	87.7	79.0	178	132.3	119.1	238	176.9	159.3	298	221.5	199.4
59	43.8	39.5	119	88.4	79.6	179	133.0	119.8	239	177.6	159.9	299	222.2	200.1
60	**44.6**	**40.1**	**120**	**89.2**	**80.3**	**180**	**133.8**	**120.4**	**240**	**178.4**	**160.6**	**300**	**222.9**	**200.7**
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.7	00.7	61	44.6	41.6	121	88.5	82.5	181	132.4	123.4	241	176.3	164.4
2	01.5	01.4	62	45.3	42.3	122	89.2	83.2	182	133.1	124.1	242	177.0	165.0
3	02.2	02.0	63	46.1	43.0	123	90.0	83.9	183	133.8	124.8	243	177.7	165.7
4	02.9	02.7	64	46.8	43.6	124	90.7	84.6	184	134.6	125.5	244	178.5	166.4
5	03.7	03.4	65	47.5	44.3	125	91.4	85.2	185	135.3	126.2	245	179.2	167.1
6	04.4	04.1	66	48.3	45.0	126	92.2	85.9	186	136.0	126.9	246	179.9	167.8
7	05.1	04.8	67	49.0	45.7	127	92.9	86.6	187	136.8	127.5	247	180.6	168.5
8	05.9	05.5	68	49.7	46.4	128	93.6	87.3	188	137.5	128.2	248	181.4	169.1
9	06.6	06.1	69	50.5	47.1	129	94.3	88 0	189	138.2	128.9	249	182.1	169.8
10	07.3	06.8	70	51.2	47.7	130	95.1	88.7	190	139.0	129.6	250	182.8	170.5
11	08.0	07.5	71	51.9	48.4	131	95.8	89.3	191	139.7	130.3	251	183.6	171.2
12	08.8	08.2	72	52.7	49.1	132	96.5	90.0	192	140.4	130.9	252	184.3	171.9
13	09.5	08.9	73	53.4	49.8	133	97.3	90.7	193	141.2	131.6	253	185.0	172.5
14	10.2	09.5	74	54.1	50.5	134	98.0	91.4	194	141.9	132.3	254	185.8	173.2
15	11.0	10.2	75	54.9	51.1	135	98.7	92.1	195	142.6	133.0	255	186.5	173.9
16	11.7	10.9	76	55.6	51.8	136	99.5	92.8	196	143.3	133.7	256	187.2	174.6
17	12.4	11.6	77	56.3	52.5	137	100.2	93.4	197	144.1	134.4	257	188.0	175.3
18	13.2	12.3	78	57.0	53.2	138	100.9	94.1	198	144.8	135.0	258	188.7	176.0
19	13.9	13.0	79	57.8	53.9	139	101.7	94.8	199	145.5	135.7	259	189.4	176.6
20	14.6	13.6	80	58.5	54.6	140	102.4	95.5	200	146.3	136.4	260	190.2	177.3
21	15.4	14.3	81	59.2	55.2	141	103.1	96.2	201	147.0	137.1	261	190.9	178.0
22	16.1	15.0	82	60.0	55.9	142	103.9	96.8	202	147.7	137.8	262	191.6	178.7
23	16.8	15.7	83	60.7	56.6	143	104.6	97.5	203	148.5	138.4	263	192.3	179.4
24	17.6	16.4	84	61.4	57.3	144	105.3	98.2	204	149.2	139.1	264	193.1	180.0
25	18.3	17.0	85	62.2	58.0	145	106.0	98.9	205	149.9	139.8	265	193.8	180.7
26	19.0	17.7	86	62.9	58.7	146	106.8	99.6	206	150.7	140.5	266	194.5	181.4
27	19.7	18.4	87	63.6	59.3	147	107.5	100.3	207	151.4	141.2	267	195.3	182.1
28	20.5	19.1	88	64.4	60.0	148	108.2	100.9	208	152.1	141.9	268	196.0	182.8
29	21.2	19.8	89	65.1	60.7	149	109.0	101.6	209	152.9	142.5	269	196.7	183.5
30	21.9	20.5	90	65.8	61.4	150	109.7	102.3	210	153.6	143.2	270	197.5	184.1
31	22.7	21.1	91	66.6	62.1	151	110.4	103.0	211	154.3	143.9	271	198.2	184.8
32	23.4	21.8	92	67.3	62.7	152	111.2	103.7	212	155.0	144.6	272	198.9	185.5
33	24.1	22.5	93	68.0	63.4	153	111.9	104.3	213	155.8	145.3	273	199.7	186.2
34	24.9	23.2	94	68.7	64.1	154	112.6	105.0	214	156.5	145.9	274	200.4	186.9
35	25.6	23.9	95	69.5	64.8	155	113.4	105.7	215	157.2	146.6	275	201.1	187.5
36	26.3	24.6	96	70.2	65.5	156	114.1	106.4	216	158.0	147.3	276	201.9	188.2
37	27.1	25.2	97	70.9	66.2	157	114.8	107.1	217	158.7	148.0	277	202.6	188.9
38	27.8	25.9	98	71.7	66.8	158	115.6	107.8	218	159.4	148.7	278	203.3	189.6
39	28.5	26.6	99	72.4	67.5	159	116.3	108.4	219	160.2	149.4	279	204.0	190.3
40	29.3	27.3	100	73.1	68.2	160	117.0	109.1	220	160.9	150.0	280	204.8	191.0
41	30.0	28.0	101	73.9	68.9	161	117.7	109.8	221	161.6	150.7	281	205.5	191.6
42	30.7	28.6	102	74.6	69.6	162	118.5	110.5	222	162.4	151.4	282	206.2	192.3
43	31.4	29.3	103	75.3	70.2	163	119.2	111.2	223	163.1	152.1	283	207.0	193.0
44	32.2	30.0	104	76.1	70.9	164	119.9	111.8	224	163.8	152.8	284	207.7	193.7
45	32.9	30.7	105	76.8	71.6	165	120.7	112.5	225	164.6	153.4	285	208.4	194.4
46	33.6	31.4	106	77.5	72.3	166	121.4	113.2	226	165.3	154.1	286	209.2	195.1
47	34.4	32.1	107	78.3	73.0	167	122.1	113.9	227	166.0	154.8	287	209.9	195.7
48	35.1	32.7	108	79.0	73.7	168	122.9	114.6	228	166.7	155.5	288	210.6	196.4
49	35.8	33.4	109	79.7	74.3	169	123.6	115.3	229	167.5	156.2	289	211.4	197.1
50	36.6	34.1	110	80.4	75.0	170	124.3	115.9	230	168.2	156.9	290	212.1	197.8
51	37.3	34.8	111	81.2	75.7	171	125.1	116.6	231	168.9	157.5	291	212.8	198.5
52	38.0	35.5	112	81.9	76.4	172	125.8	117.3	232	169.7	158.2	292	213.6	199.1
53	38.8	36.1	113	82.6	77.1	173	126.5	118.0	233	170.4	158.9	293	214.3	199.8
54	39.5	36.8	114	83.4	77.7	174	127.3	118.7	234	171.1	159.6	294	215.0	200.5
55	40.2	37.5	115	84.1	78.4	175	128.0	119.3	235	171.9	160.3	295	215.7	201.2
56	41.0	38.2	116	84.8	79.1	176	128.7	120.0	236	172.6	161.0	296	216.5	201.9
57	41.7	38.9	117	85.6	79.8	177	129.4	120.7	237	173.3	161.6	297	217.2	202.6
58	42.4	39.6	118	86.3	80.5	178	130.2	121.4	238	174.1	162.3	298	217.9	203.2
59	43.1	40.2	119	87.0	81.2	179	130.9	122.1	239	174.8	163.0	299	218.7	203.9
60	43.9	40.9	120	87.8	81.8	180	131.6	122.8	240	175.5	163.7	300	219.4	204.6
Dist.	*Dep.*	*Lat.*	*Dist.*	*Dep.*	*Lat.*	*Dist.*	*Dep.*	*Lat.*	*Dist.*	*Dep.*	*Lat.*	*Dist.*	*Dep.*	*Lat.*

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.7	00.7	61	43.9	42.4	121	87.0	84.1	181	130.2	125.7	241	173.4	167.4
2	01.4	01.4	62	44.6	43.1	122	87.8	84.7	182	130.9	126.4	242	174.1	168.1
3	02.2	02.1	63	45.3	43.8	123	88.5	85.4	183	131.6	127.1	243	174.8	168.8
4	02.9	02.8	64	46.0	44.5	124	89.2	86.1	184	132.4	127.8	244	175.5	169.5
5	03.6	03.5	65	46.8	45.2	125	89.9	86.8	185	133.1	128.5	245	176.2	170.2
6	04.3	04.2	66	47.5	45.8	126	90.6	87.5	186	133.8	129.2	246	177.0	170.9
7	05.0	04.9	67	48.2	46.5	127	91.4	88.2	187	134.5	129.9	247	177.7	171.6
8	05.8	05.6	68	48.9	47.2	128	92.1	88.9	188	135.2	130.6	248	178.4	172.3
9	06.5	06.3	69	49.6	47.9	129	92.8	89.6	189	136.0	131.3	249	179.1	173.0
10	**07.2**	**06.9**	**70**	**50.4**	**48.6**	**130**	**93.5**	**90.3**	**190**	**136.7**	**132.0**	**250**	**179.8**	**173.7**
11	07.9	07.6	71	51.1	49.3	131	94.2	91.0	191	137.4	132.7	251	180.6	174.4
12	08.6	08.3	72	51.8	50.0	132	95.0	91.7	192	138.1	133.4	252	181.3	175.1
13	09.4	09.0	73	52.5	50.7	133	95.7	92.4	193	138.8	134.1	253	182.0	175.7
14	10.1	09.7	74	53.2	51.4	134	96.4	93.1	194	139.6	134.8	254	182.7	176.4
15	10.8	10.4	75	54.0	52.1	135	97.1	93.8	195	140.3	135.5	255	183.4	177.1
16	11.5	11.1	76	54.7	52.8	136	97.8	94.5	196	141.0	136.2	256	184.2	177.8
17	12.2	11.8	77	55.4	53.5	137	98.5	95.2	197	141.7	136.8	257	184.9	178.5
18	12.9	12.5	78	56.1	54.2	138	99.3	95.9	198	142.4	137.5	258	185.6	179.2
19	13.7	13.2	79	56.8	54.9	139	100.0	96.6	199	143.1	138.2	259	186.3	179.9
20	**14.4**	**13.9**	**80**	**57.5**	**55.6**	**140**	**100.7**	**97.3**	**200**	**143.9**	**138.9**	**260**	**187.0**	**180.6**
21	15.1	14.6	81	58.3	56.3	141	101.4	97.9	201	144.6	139.6	261	187.7	181.3
22	15.8	15.3	82	59.0	57.0	142	102.1	98.6	202	145.3	140.3	262	188.5	182.0
23	16.5	16.0	83	59.7	57.7	143	102.9	99.3	203	146.0	141.0	263	189.2	182.7
24	17.3	16.7	84	60.4	58.4	144	103.6	100.0	204	146.7	141.7	264	189.9	183.4
25	18.0	17.4	85	61.1	59.0	145	104.3	100.7	205	147.5	142.4	265	190.6	184.1
26	18.7	18.1	86	61.9	59.7	146	105.0	101.4	206	148.2	143.1	266	191.3	184.8
27	19.4	18.8	87	62.6	60.4	147	105.7	102.1	207	148.9	143.8	267	192.1	185.5
28	20.1	19.5	88	63.3	61.1	148	106.5	102.8	208	149.6	144.5	268	192.8	186.2
29	20.9	20.1	89	64.0	61.8	149	107.2	103.5	209	150.3	145.2	269	193.5	186.9
30	**21.6**	**20.8**	**90**	**64.7**	**62.5**	**150**	**107.9**	**104.2**	**210**	**151.1**	**145.9**	**270**	**194.2**	**187.6**
31	22.3	21.5	91	65.5	63.2	151	108.6	104.9	211	151.8	146.6	271	194.9	188.3
32	23.0	22.2	92	66.2	63.9	152	109.3	105.6	212	152.5	147.3	272	195.7	188.9
33	23.7	22.9	93	66.9	64.6	153	110.1	106.3	213	153.2	148.0	273	196.4	189.6
34	24.5	23.6	94	67.6	65.3	154	110.8	107.0	214	153.9	148.7	274	197.1	190.3
35	25.2	24.3	95	68.3	66.0	155	111.5	107.7	215	154.7	149.4	275	197.8	191.0
36	25.9	25.0	96	69.1	66.7	156	112.2	108.4	216	155.4	150.0	276	198.5	191.7
37	26.6	25.7	97	69.8	67.4	157	112.9	109.1	217	156.1	150.7	277	199.3	192.4
38	27.3	26.4	98	70.5	68.1	158	113.7	109.8	218	156.8	151.4	278	200.0	193.1
39	28.1	27.1	99	71.2	68.8	159	114.4	110.5	219	157.5	152.1	279	200.7	193.8
40	**28.8**	**27.8**	**100**	**71.9**	**69.5**	**160**	**115.1**	**111.1**	**220**	**158.3**	**152.8**	**280**	**201.4**	**194.5**
41	29.5	28.5	101	72.7	70.2	161	115.8	111.8	221	159.0	153.5	281	202.1	195.2
42	30.2	29.2	102	73.4	70.9	162	116.5	112.5	222	159.7	154.2	282	202.9	195.9
43	30.9	29.9	103	74.1	71.5	163	117.3	113.2	223	160.4	154.9	283	203.6	196.6
44	31.7	30.6	104	74.8	72.2	164	118.0	113.9	224	161.1	155.6	284	204.3	197.3
45	32.4	31.3	105	75.5	72.9	165	118.7	114.6	225	161.9	156.3	285	205.0	198.0
46	33.1	32.0	106	76.3	73.6	166	119.4	115.3	226	162.6	157.0	286	205.7	198.7
47	33.8	32.6	107	77.0	74.3	167	120.1	116.0	227	163.3	157.7	287	206.5	199.4
48	34.5	33.3	108	77.7	75.0	168	120.8	116.7	228	164.0	158.4	288	207.2	200.1
49	35.2	34.0	109	78.4	75.7	169	121.6	117.4	229	164.7	159.1	289	207.9	200.8
50	**36.0**	**34.7**	**110**	**79.1**	**76.4**	**170**	**122.3**	**118.1**	**230**	**165.4**	**159.8**	**290**	**208.6**	**201.5**
51	36.7	35.4	111	79.8	77.1	171	123.0	118.8	231	166.2	160.5	291	209.3	202.1
52	37.4	36.1	112	80.6	77.8	172	123.7	119.5	232	166.9	161.2	292	210.0	202.8
53	38.1	36.8	113	81.3	78.5	173	124.4	120.2	233	167.6	161.9	293	210.8	203.5
54	38.8	37.5	114	82.0	79.2	174	125.2	120.9	234	168.3	162.6	294	211.5	204.2
55	39.6	38.2	115	82.7	79.9	175	125.9	121.6	235	169.0	163.2	295	212.2	204.9
56	40.3	38.9	116	83.4	80.6	176	126.6	122.3	236	169.8	163.9	296	212.9	205.6
57	41.0	39.6	117	84.2	81.3	177	127.3	123.0	237	170.5	164.6	297	213.6	206.3
58	41.7	40.3	118	84.9	82.0	178	128.0	123.6	238	171.2	165.3	298	214.4	207.0
59	42.4	41.0	119	85.6	82.7	179	128.8	124.3	239	171.9	166.0	299	215.1	207.7
60	**43.2**	**41.7**	**120**	**86.3**	**83.4**	**180**	**129.5**	**125.0**	**240**	**172.6**	**166.7**	**300**	**215.8**	**208.4**
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.	Dist.	Lat.	Dep.
1	00.7	00.7	61	43.1	43.1	121	85.6	85.6	181	128.0	128.0	241	170.4	170.4
2	01.4	01.4	62	43.8	43.8	122	86.3	86.3	182	128.7	128.7	242	171.1	171.1
3	02.1	02.1	63	44.5	44.5	123	87.0	87.0	183	129.4	129.4	243	171.8	171.8
4	02.8	02.8	64	45.3	45.3	124	87.7	87.7	184	130.1	130.1	244	172.5	172.5
5	03.5	03.5	65	46.0	46.0	125	88.4	88.4	185	130.8	130.8	245	173.2	173.2
6	04.2	04.2	66	46.7	46.7	126	89.1	89.1	186	131.5	131.5	246	173.9	173.9
7	04.9	04.9	67	47.4	47.4	127	89.8	89.8	187	132.2	132.2	247	174.7	174.7
8	05.7	05.7	68	48.1	48.1	128	90.5	90.5	188	132.9	132.9	248	175.4	175.4
9	06.4	06.4	69	48.8	48.8	129	91.2	91.2	189	133.6	133.6	249	176.1	176.1
10	07.1	07.1	70	49.5	49.5	130	91.9	91.9	190	134.4	134.4	250	176.8	176.8
11	07.8	07.8	71	50.2	50.2	131	92.6	92.6	191	135.1	135.1	251	177.5	177.5
12	08.5	08.5	72	50.9	50.9	132	93.3	93.3	192	135.8	135.8	252	178.2	178.2
13	09.2	09.2	73	51.6	51.6	133	94.0	94.0	193	136.5	136.5	253	178.9	178.9
14	09.9	09.9	74	52.3	52.3	134	94.8	94.8	194	137.2	137.2	254	179.6	179.6
15	10.6	10.6	75	53.0	53.0	135	95.5	95.5	195	137.9	137.9	255	180.3	180.3
16	11.3	11.3	76	53.7	53.7	136	96.2	96.2	196	138.6	138.6	256	181.0	181.0
17	12.0	12.0	77	54.4	54.4	137	96.9	96.9	197	139.3	139.3	257	181.7	181.7
18	12.7	12.7	78	55.2	55.2	138	97.6	97.6	198	140.0	140.0	258	182.4	182.4
19	13.4	13.4	79	55.9	55.9	139	98.3	98.3	199	140.7	140.7	259	183.1	183.1
20	14.1	14.1	80	56.6	56.6	140	99.0	99.0	200	141.4	141.4	260	183.8	183.8
21	14.8	14.8	81	57.3	57.3	141	99.7	99.7	201	142.1	142.1	261	184.6	184.6
22	15.6	15.6	82	58.0	58.0	142	100.4	100.4	202	142.8	142.8	262	185.3	185.3
23	16.3	16.3	83	58.7	58.7	143	101.1	101.1	203	143.5	143.5	263	186.0	186.0
24	17.0	17.0	84	59.4	59.4	144	101.8	101.8	204	144.2	144.2	264	186.7	186.7
25	17.7	17.7	85	60.1	60.1	145	102.5	102.5	205	145.0	145.0	265	187.4	187.4
26	18.4	18.4	86	60.8	60.8	146	103.2	103.2	206	145.7	145.7	266	188.1	188.1
27	19.1	19.1	87	61.5	61.5	147	103.9	103.9	207	146.4	146.4	267	188.8	188.8
28	19.8	19.8	88	62.2	62.2	148	104.7	104.7	208	147.1	147.1	268	189.5	189.5
29	20.5	20.5	89	62.9	62.9	149	105.4	105.4	209	147.8	147.8	269	190.2	190.2
30	21.2	21.2	90	63.6	63.6	150	106.1	106.1	210	148.5	148.5	270	190.9	190.9
31	21.9	21.9	91	64.3	64.3	151	106.8	106.8	211	149.2	149.2	271	191.6	191.6
32	22.6	22.6	92	65.1	65.1	152	107.5	107.5	212	149.9	149.9	272	192.3	192.3
33	23.3	23.3	93	65.8	65.8	153	108.2	108.2	213	150.6	150.6	273	193.0	193.0
34	24.0	24.0	94	66.5	66.5	154	108.9	108.9	214	151.3	151.3	274	193.7	193.7
35	24.7	24.7	95	67.2	67.2	155	109.6	109.6	215	152.0	152.0	275	194.5	194.5
36	25.5	25.5	96	67.9	67.9	156	110.3	110.3	216	152.7	152.7	276	195.2	195.2
37	26.2	26.2	97	68.6	68.6	157	111.0	111.0	217	153.4	153.4	277	195.9	195.9
38	26.9	26.9	98	69.3	69.3	158	111.7	111.7	218	154.1	154.1	278	196.6	196.6
39	27.6	27.6	99	70.0	70.0	159	112.4	112.4	219	154.9	154.9	279	197.3	197.3
40	28.3	28.3	100	70.7	70.7	160	113.1	113.1	220	155.6	155.6	280	198.0	198.0
41	29.0	29.0	101	71.4	71.4	161	113.8	113.8	221	156.3	156.3	281	198.7	198.7
42	29.7	29.7	102	72.1	72.1	162	114.6	114.6	222	157.0	157.0	282	199.4	199.4
43	30.4	30.4	103	72.8	72.8	163	115.3	115.3	223	157.7	157.7	283	200.1	200.1
44	31.1	31.1	104	73.5	73.5	164	116.0	116.0	224	158.4	158.4	284	200.8	200.8
45	31.8	31.8	105	74.2	74.2	165	116.7	116.7	225	159.1	159.1	285	201.5	201.5
46	32.5	32.5	106	75.0	75.0	166	117.4	117.4	226	159.8	159.8	286	202.2	202.2
47	33.2	33.2	107	75.7	75.7	167	118.1	118.1	227	160.5	160.5	287	202.9	202.9
48	33.9	33.9	108	76.4	76.4	168	118.8	118.8	228	161.2	161.2	288	203.6	203.6
49	34.6	34.6	109	77.1	77.1	169	119.5	119.5	229	161.9	161.9	289	204.4	204.4
50	35.4	35.4	110	77.8	77.8	170	120.2	120.2	230	162.6	162.6	290	205.1	205.1
51	36.1	36.1	111	78.5	78.5	171	120.9	120.9	231	163.3	163.3	291	205.8	205.8
52	36.8	36.8	112	79.2	79.2	172	121.6	121.6	232	164.0	164.0	292	206.5	206.5
53	37.5	37.5	113	79.9	79.9	173	122.3	122.3	233	164.8	164.8	293	207.2	207.2
54	38.2	38.2	114	80.6	80.6	174	123.0	123.0	234	165.5	165.5	294	207.9	207.9
55	38.9	38.9	115	81.3	81.3	175	123.7	123.7	235	166.2	166.2	295	208.6	208.6
56	39.6	39.6	116	82.0	82.0	176	124.5	124.5	236	166.9	166.9	296	209.3	209.3
57	40.3	40.3	117	82.7	82.7	177	125.2	125.2	237	167.6	167.6	297	210.0	210.0
58	41.0	41.0	118	83.4	83.4	178	125.9	125.9	238	168.3	168.3	298	210.7	210.7
59	41.7	41.7	119	84.1	84.1	179	126.6	126.6	239	169.0	169.0	299	211.4	211.4
60	42.4	42.4	120	84.9	84.9	180	127.3	127.3	240	169.7	169.7	300	212.1	212.1
Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.	Dist.	Dep.	Lat.

TABLE VII.

PROPORTIONAL LOGARITHMS.

Sec.	0 Hours or 0 Degrees.								
	0 m.	1 m.	2 m.	3 m.	4 m.	5 m.	6 m.	7 m.	8 m.
0		2.2553	1.9542	1.7782	1.6532	1.5563	1.4771	1.4102	1.3522
1	4.0334	2.2481	1.9506	1.7757	1.6514	1.5549	1.4759	1.4091	1.3513
2	3.7324	2.2410	1.9471	1.7734	1.6496	1.5534	1.4747	1.4081	1.3504
3	3.5563	2.2341	1.9435	1.7710	1.6478	1.5520	1.4735	1.4071	1.3495
4	3.4314	2.2272	1.9400	1.7686	1.6460	1.5505	1.4723	1.4061	1.3486
5	3.3345	2.2205	1.9365	1.7663	1.6443	1.5491	1.4711	1.4050	1.3477
6	3.2553	2.2139	1.9331	1.7639	1.6425	1.5477	1.4699	1.4040	1.3468
7	3.1883	2.2073	1.9296	1.7616	1.6407	1.5463	1.4688	1.4030	1.3459
8	3.1303	2.2009	1.9262	1.7593	1.6390	1.5449	1.4676	1.4020	1.3450
9	**3.0792**	**2.1946**	**1.9228**	**1.7570**	**1.6372**	**1.5435**	**1.4664**	**1.4010**	**1.3441**
10	3.0334	2.1883	1.9195	1.7547	1.6355	1.5421	1.4652	1.4000	1.3432
11	2.9920	2.1822	1.9162	1.7524	1.6337	1.5407	1.4640	1.3989	1.3423
12	2.9542	2.1761	1.9128	1.7501	1.6320	1.5393	1.4629	1.3979	1.3415
13	2.9195	2.1701	1.9096	1.7479	1.6303	1.5379	1.4617	1.3969	1.3406
14	2.8873	2.1642	1.9063	1.7456	1.6286	1.5365	1.4605	1.3959	1.3397
15	2.8573	2.1584	1.9031	1.7434	1.6269	1.5351	1.4594	1.3949	1.3388
16	2.8293	2.1526	1.8999	1.7412	1.6252	1.5337	1.4582	1.3939	1.3379
17	2.8030	2.1469	1.8967	1.7390	1.6235	1.5324	1.4571	1.3929	1.3371
18	2.7782	2.1413	1.8935	1.7368	1.6218	1.5310	1.4559	1.3919	1.3362
19	**2.7547**	**2.1358**	**1.8904**	**1.7346**	**1.6201**	**1.5296**	**1.4548**	**1.3910**	**1.3353**
20	2.7324	2.1303	1.8873	1.7324	1.6184	1.5283	1.4536	1.3900	1.3344
21	2.7112	2.1249	1.8842	1.7302	1.6168	1.5269	1.4525	1.3890	1.3336
22	2.6910	2.1196	1.8811	1.7281	1.6151	1.5256	1.4514	1.3880	1.3327
23	2.6717	2.1143	1.8781	1.7259	1.6135	1.5242	1.4502	1.3870	1.3319
24	2.6532	2.1091	1.8751	1.7238	1.6118	1.5229	1.4491	1.3860	1.3310
25	2.6355	2.1040	1.8721	1.7217	1.6102	1.5215	1.4480	1.3851	1.3301
26	2.6184	2.0989	1.8691	1.7196	1.6085	1.5202	1.4468	1.3841	1.3293
27	2.6021	2.0939	1.8661	1.7175	1.6069	1.5189	1.4457	1.3831	1.3284
28	2.5863	2.0889	1.8632	1.7154	1.6053	1.5175	1.4446	1.3821	1.3276
29	**2.5710**	**2.0840**	**1.8602**	**1.7133**	**1.6037**	**1.5162**	**1.4435**	**1.3812**	**1.3267**
30	2.5563	2.0792	1.8573	1.7112	1.6021	1.5149	1.4424	1.3802	1.3259
31	2.5421	2.0744	1.8544	1.7091	1.6004	1.5136	1.4412	1.3792	1.3250
32	2.5283	2.0696	1.8516	1.7071	1.5988	1.5123	1.4401	1.3783	1.3241
33	2.5149	2.0649	1.8487	1.7050	1.5973	1.5110	1.4390	1.3773	1.3233
34	2.5019	2.0603	1.8459	1.7030	1.5957	1.5097	1.4379	1.3764	1.3225
35	2.4894	2.0557	1.8431	1.7010	1.5941	1.5084	1.4368	1.3754	1.3216
36	2.4771	2.0512	1.8403	1.6990	1.5925	1.5071	1.4357	1.3745	1.3208
37	2.4652	2.0467	1.8375	1.6970	1.5909	1.5058	1.4346	1.3735	1.3199
38	2.4536	2.0422	1.8348	1.6950	1.5894	1.5045	1.4335	1.3726	1.3191
39	**2.4424**	**2.0378**	**1.8320**	**1.6930**	**1.5878**	**1.5032**	**1.4325**	**1.3716**	**1.3183**
40	2.4314	2.0334	1.8293	1.6910	1.5863	1.5019	1.4314	1.3707	1.3174
41	2.4206	2.0291	1.8266	1.6890	1.5847	1.5007	1.4303	1.3697	1.3166
42	2.4102	2.0248	1.8239	1.6871	1.5832	1.4994	1.4292	1.3688	1.3158
43	2.4000	2.0206	1.8212	1.6851	1.5816	1.4981	1.4281	1.3678	1.3149
44	2.3900	2.0164	1.8186	1.6832	1.5801	1.4969	1.4270	1.3669	1.3141
45	2.3802	2.0122	1.8159	1.6812	1.5786	1.4956	1.4260	1.3660	1.3133
46	2.3707	2.0081	1.8133	1.6793	1.5771	1.4943	1.4249	1.3650	1.3124
47	2.3613	2.0040	1.8107	1.6774	1.5755	1.4931	1.4238	1.3641	1.3116
48	2.3522	2.0000	1.8081	1.6755	1.5740	1.4918	1.4228	1.3632	1.3108
49	**2.3432**	**1.9960**	**1.8055**	**1.6736**	**1.5725**	**1.4906**	**1.4217**	**1.3622**	**1.3100**
50	2.3345	1.9920	1.8030	1.6717	1.5710	1.4894	1.4206	1.3613	1.3091
51	2.3259	1.9881	1.8004	1.6698	1.5695	1.4881	1.4196	1.3604	1.3083
52	2.3174	1.9842	1.7979	1.6679	1.5680	1.4869	1.4185	1.3595	1.3075
53	2.3091	1.9803	1.7954	1.6661	1.5666	1.4856	1.4175	1.3586	1.3067
54	2.3010	1.9765	1.7929	1.6642	1.5651	1.4844	1.4164	1.3576	1.3059
55	2.2931	1.9727	1.7904	1.6624	1.5636	1.4832	1.4154	1.3567	1.3051
56	2.2852	1.9690	1.7879	1.6605	1.5621	1.4820	1.4143	1.3558	1.3043
57	2.2775	1.9652	1.7855	1.6587	1.5607	1.4808	1.4133	1.3549	1.3034
58	2.2700	1.9615	1.7830	1.6568	1.5592	1.4795	1.4122	1.3540	1.3026
59	**2.2626**	**1.9579**	**1.7806**	**1.6550**	**1.5577**	**1.4783**	**1.4112**	**1.3531**	**1.3018**

Sec.	0 Hours or 0 Degrees.								
	9 m.	10 m.	11 m.	12 m.	13 m.	14 m.	15 m.	16 m.	17 m.
0	1.3010	1.2553	1.2139	1.1761	1.1413	1.1091	1.0792	1.0512	1.0248
1	1.3002	1.2545	1.2132	1.1755	1.1408	1.1086	1.0787	1.0507	1.0244
2	1.2994	1.2538	1.2126	1.1749	1.1402	1.1081	1.0782	1.0502	1.0240
3	1.2986	1.2531	1.2119	1.1743	1.1397	1.1076	1.0777	1.0498	1.0235
4	1.2978	1.2524	1.2113	1.1737	1.1391	1.1071	1.0773	1.0493	1.0231
5	1.2970	1.2517	1.2106	1.1731	1.1385	1.1066	1.0768	1.0489	1.0227
6	1.2962	1.2510	1.2099	1.1725	1.1380	1.1061	1.0763	1.0484	1.0223
7	1.2954	1.2502	1.2093	1.1719	1.1374	1.1055	1.0758	1.0480	1.0218
8	1.2946	1.2495	1.2086	1.1713	1.1369	1.1050	1.0753	1.0475	1.0214
9	1.2939	1.2488	1.2080	1.1707	1.1363	1.1045	1.0749	1.0471	1.0210
10	1.2931	1.2481	1.2073	1.1701	1.1358	1.1040	1.0744	1.0467	1.0206
11	1.2923	1.2474	1.2067	1.1695	1.1352	1.1035	1.0739	1.0462	1.0202
12	1.2915	1.2467	1.2061	1.1689	1.1347	1.1030	1.0734	1.0458	1.0197
13	1.2907	1.2460	1.2054	1.1683	1.1341	1.1025	1.0729	1.0453	1.0193
14	1.2899	1.2453	1.2048	1.1677	1.1336	1.1020	1.0725	1.0449	1.0189
15	1.2891	1.2445	1.2041	1.1671	1.1331	1.1015	1.0720	1.0444	1.0185
16	1.2883	1.2438	1.2035	1.1665	1.1325	1.1009	1.0715	1.0440	1.0181
17	1.2876	1.2431	1.2028	1.1660	1.1320	1.1004	1.0710	1.0435	1.0176
18	1.2868	1.2424	1.2022	1.1654	1.1314	1.0999	1.0706	1.0431	1.0172
19	1.2860	1.2417	1.2015	1.1648	1.1309	1.0994	1.0701	1.0426	1.0168
20	1.2852	1.2410	1.2009	1.1642	1.1303	1.0989	1.0696	1.0422	1.0164
21	1.2845	1.2403	1.2003	1.1636	1.1298	1.0984	1.0692	1.0418	1.0160
22	1.2837	1.2396	1.1996	1.1630	1.1292	1.0979	1.0687	1.0413	1.0156
23	1.2829	1.2389	1.1990	1.1624	1.1287	1.0974	1.0682	1.0409	1.0151
24	1.2821	1.2382	1.1984	1.1619	1.1282	1.0969	1.0678	1.0404	1.0147
25	1.2814	1.2375	1.1977	1.1613	1.1276	1.0964	1.0673	1.0400	1.0143
26	1.2806	1.2368	1.1971	1.1607	1.1271	1.0959	1.0668	1.0395	1.0139
27	1.2798	1.2362	1.1965	1.1601	1.1266	1.0954	1.0663	1.0391	1.0135
28	1.2791	1.2355	1.1958	1.1595	1.1260	1.0949	1.0659	1.0387	1.0131
29	1.2783	1.2348	1.1952	1.1589	1.1255	1.0944	1.0654	1.0382	1.0126
30	1.2775	1.2341	1.1946	1.1584	1.1249	1.0939	1.0649	1.0378	1.0122
31	1.2768	1.2334	1.1939	1.1578	1.1244	1.0934	1.0645	1.0373	1.0118
32	1.2760	1.2327	1.1933	1.1572	1.1239	1.0929	1.0640	1.0369	1.0114
33	1.2753	1.2320	1.1927	1.1566	1.1233	1.0924	1.0635	1.0365	1.0110
34	1.2745	1.2313	1.1921	1.1560	1.1228	1.0919	1.0631	1.0360	1.0106
35	1.2738	1.2306	1.1914	1.1555	1.1223	1.0914	1.0626	1.0356	1.0102
36	1.2730	1.2300	1.1908	1.1549	1.1217	1.0909	1.0621	1.0352	1.0098
37	1.2722	1.2293	1.1902	1.1543	1.1212	1.0904	1.0617	1.0347	1.0093
38	1.2715	1.2286	1.1896	1.1537	1.1207	1.0899	1.0612	1.0343	1.0089
39	1.2707	1.2279	1.1889	1.1532	1.1201	1.0894	1.0608	1.0339	1.0085
40	1.2700	1.2272	1.1883	1.1526	1.1196	1.0889	1.0603	1.0334	1.0081
41	1.2692	1.2266	1.1877	1.1520	1.1191	1.0884	1.0598	1.0330	1.0077
42	1.2685	1.2259	1.1871	1.1515	1.1186	1.0880	1.0594	1.0326	1.0073
43	1.2678	1.2252	1.1865	1.1509	1.1180	1.0875	1.0589	1.0321	1.0069
44	1.2670	1.2245	1.1858	1.1503	1.1175	1.0870	1.0584	1.0317	1.0065
45	1.2663	1.2239	1.1852	1.1498	1.1170	1.0865	1.0580	1.0313	1.0061
46	1.2655	1.2232	1.1846	1.1492	1.1164	1.0860	1.0575	1.0308	1.0057
47	1.2648	1.2225	1.1840	1.1486	1.1159	1.0855	1.0571	1.0304	1.0053
48	1.2640	1.2218	1.1834	1.1481	1.1154	1.0850	1.0566	1.0300	1.0049
49	1.2633	1.2212	1.1828	1.1475	1.1149	1.0845	1.0562	1.0295	1.0044
50	1.2626	1.2205	1.1822	1.1469	1.1143	1.0840	1.0557	1.0291	1.0040
51	1.2618	1.2198	1.1816	1.1464	1.1138	1.0835	1.0552	1.0287	1.0036
52	1.2611	1.2192	1.1809	1.1458	1.1133	1.0831	1.0548	1.0282	1.0032
53	1.2604	1.2185	1.1803	1.1452	1.1128	1.0826	1.0543	1.0278	1.0028
54	1.2596	1.2178	1.1797	1.1447	1.1123	1.0821	1.0539	1.0274	1.0024
55	1.2589	1.2172	1.1791	1.1441	1.1117	1.0816	1.0534	1.0270	1.0020
56	1.2582	1.2165	1.1785	1.1436	1.1112	1.0811	1.0530	1.0265	1.0016
57	*1.2574*	*1.2159*	1.1779	1.1430	1.1107	1.0806	1.0525	1.0261	1.0012
58	*1.2567*	*1.2152*	1.1773	1.1424	1.1102	1.0801	1.0521	1.0257	1.0008
59	*1.2560*	1.2145	1.1767	1.1419	1.1097	1.0797	1.0516	1.0252	1.0004

Sec.	0 Hours or 0 Degrees.											
	18 m.	19 m.	20 m.	21 m.	22 m.	23 m.	24 m.	25 m.	26 m.	27 m.	28 m.	29 m.
0	1.0000	9765	9542	9331	9128	8935	8751	8573	8403	8239	8081	7929
1	9996	9761	9539	9327	9125	8932	8748	8570	8400	8236	8079	7926
2	9992	9758	9535	9324	9122	8929	8745	8567	8397	8234	8076	7924
3	9988	9754	9532	9320	9119	8926	8742	8565	8395	8231	8073	7921
4	9984	9750	9528	9317	9115	8923	8739	8562	8392	8228	8071	7919
5	9980	9746	9524	9313	9112	8920	8736	8559	8389	8226	8068	7916
6	9976	9742	9521	9310	9109	8917	8733	8556	8386	8223	8066	7914
7	9972	9739	9517	9306	9105	8913	8730	8553	8383	8220	8063	7911
8	9968	9735	9514	9303	9102	8910	8727	8550	8381	8218	8060	7909
9	9964	9731	9510	9300	9099	8907	8724	8547	8378	8215	8058	7906
10	9960	9727	9506	9296	9096	8904	8721	8544	8375	8212	8055	7904
11	9956	9723	9503	9293	9092	8901	8718	8542	8372	8210	8053	7901
12	9952	9720	9499	9289	9089	8898	8715	8539	8370	8207	8050	7899
13	9948	9716	9496	9286	9086	8895	8712	8536	8367	8204	8048	7896
14	9944	9712	9492	9283	9083	8892	8709	8533	8364	8202	8045	7894
15	9940	9708	9488	9279	9079	8888	8706	8530	8361	8199	8043	7891
16	9936	9705	9485	9276	9076	8885	8703	8527	8359	8196	8040	7889
17	9932	9701	9481	9272	9073	8882	8700	8524	8356	8194	8037	7886
18	9928	9697	9478	9269	9070	8879	8697	8522	8353	8191	8035	7884
19	9924	9693	9474	9265	9066	8876	8694	8519	8350	8188	8032	7882
20	9920	9690	9471	9262	9063	8873	8691	8516	8348	8186	8030	7879
21	9916	9686	9467	9259	9060	8870	8688	8513	8345	8183	8027	7877
22	9912	9682	9464	9255	9057	8867	8685	8510	8342	8180	8025	7874
23	9908	9678	9460	9252	9053	8864	8682	8507	8339	8178	8022	7872
24	9905	9675	9456	9249	9050	8861	8679	8504	8337	8175	8020	7869
25	9901	9671	9453	9245	9047	8857	8676	8501	8334	8173	8017	7867
26	9897	9667	9449	9242	9044	8854	8673	8499	8331	8170	8014	7864
27	9893	9664	9446	9238	9041	8851	8670	8496	8328	8167	8012	7862
28	9889	9660	9442	9235	9037	8848	8667	8493	8326	8165	8009	7859
29	9885	9656	9439	9232	9034	8845	8664	8490	8323	8162	8007	7857
30	9881	9652	9435	9228	9031	8842	8661	8487	8320	8159	8004	7855
31	9877	9649	9432	9225	9028	8839	8658	8484	8317	8157	8002	7852
32	9873	9645	9428	9222	9024	8836	8655	8482	8315	8154	7999	7850
33	9869	9641	9425	9218	9021	8833	8652	8479	8312	8152	7997	7847
34	9865	9638	9421	9215	9018	8830	8649	8476	8309	8149	7994	7845
35	9861	9634	9418	9211	9015	8827	8646	8473	8307	8146	7992	7842
36	9858	9630	9414	9208	9012	8824	8643	8470	8304	8144	7989	7840
37	9854	9626	9410	9205	9008	8820	8640	8467	8301	8141	7986	7837
38	9850	9623	9407	9201	9005	8817	8637	8465	8298	8138	7984	7835
39	9846	9619	9404	9198	9002	8814	8635	8462	8296	8136	7981	7832
40	9842	9615	9400	9195	8999	8811	8632	8459	8293	8133	7979	7830
41	9838	9612	9396	9191	8996	8808	8629	8456	8290	8130	7976	7828
42	9834	9608	9393	9188	8992	8805	8626	8453	8288	8128	7974	7825
43	9830	9604	9389	9185	8989	8802	8623	8451	8285	8125	7971	7823
44	9827	9601	9386	9181	8986	8799	8620	8448	8282	8123	7969	7820
45	9823	9597	9383	9178	8983	8796	8617	8445	8279	8120	7966	7818
46	9819	9593	9379	9175	8980	8793	8614	8442	8277	8117	7964	7815
47	9815	9590	9376	9171	8977	8790	8611	8439	8274	8115	7961	7813
48	9811	9586	9372	9168	8973	8787	8608	8437	8271	8112	7959	7811
49	9807	9582	9369	9165	8970	8784	8605	8434	8269	8110	7956	7808
50	9803	9579	9365	9161	8967	8781	8602	8431	8266	8107	7954	7806
51	9800	9575	9362	9158	8964	8778	8599	8428	8263	8104	7951	7803
52	9796	9571	9358	9155	8961	8775	8596	8425	8261	8102	7949	7801
53	9792	9568	9355	9152	8957	8772	8594	8422	8258	8099	7946	7798
54	9788	9564	9351	9148	8954	8769	8591	8420	8255	8097	7944	7796
55	9784	9561	9348	9145	8951	8766	8588	8417	8252	8094	7941	7794
56	9780	9557	9344	9142	8948	8763	8585	8414	8250	8091	7939	7791
57	9777	9553	9341	9138	8945	8760	8582	8411	8247	8089	7936	7789
58	9773	9550	9337	9135	8942	8757	8579	8409	8244	8086	7934	7786
59	9769	9546	9334	9132	8939	8754	8576	8406	8242	8084	7931	7784

Sec.	0 Hours or 0 Degrees.											
	30 m.	31 m.	32 m.	33 m.	34 m.	35 m.	36 m.	37 m.	38 m.	39 m.	40 m.	41 m.
0	7782	7639	7501	7368	7238	7112	6990	6871	6755	6642	6532	6425
1	7779	7637	7499	7365	7236	7110	6988	6869	6753	6640	6530	6423
2	7777	7634	7497	7363	7234	7108	6986	6867	6751	6638	6528	6421
3	7774	7632	7494	7361	7232	7106	6984	6865	6749	6637	6527	6420
4	7772	7630	7492	7359	7229	7104	6982	6863	6747	6635	6525	6418
5	7769	7627	7490	7357	7227	7102	6980	6861	6745	6633	6523	6416
6	7767	7625	7488	7354	7225	7100	6978	6859	6743	6631	6521	6414
7	7765	7623	7485	7352	7223	7098	6976	6857	6742	6629	6519	6412
8	7762	7620	7483	7350	7221	7095	6974	6855	6740	6627	6518	6411
9	7760	7618	7481	7348	7219	7093	6972	6853	6738	6625	6516	6409
10	7757	7616	7479	7346	7217	7091	6970	6851	6736	6624	6514	6407
11	7755	7613	7476	7343	7215	7089	6968	6849	6734	6622	6512	6405
12	7753	7611	7474	7341	7212	7087	6966	6847	6732	6620	6510	6404
13	7750	7609	7472	7339	7210	7085	6964	6845	6730	6618	6509	6402
14	7748	7606	7470	7337	7208	7083	6962	6843	6728	6616	6507	6400
15	7745	7604	7467	7335	7206	7081	6960	6841	6726	6614	6505	6398
16	7743	7602	7465	7333	7204	7079	6958	6839	6724	6612	6503	6397
17	7741	7600	7463	7330	7202	7077	6956	6838	6723	6614	6501	6395
18	7738	7597	7461	7328	7200	7075	6954	6836	6721	6609	6500	6393
19	7736	7595	7458	7326	7198	7073	6952	6834	6719	6607	6498	6391
20	7734	7593	7456	7324	7196	7071	6950	6832	6717	6605	6496	6390
21	7731	7590	7454	7322	7193	7069	6948	6830	6715	6603	6494	6388
22	7729	7588	7452	7320	7191	7067	6946	6828	6713	6601	6492	6386
23	7726	7586	7449	7317	7189	7065	6944	6826	6711	6600	6491	6384
24	7724	7583	7447	7315	7187	7063	6942	6824	6709	6598	6489	6383
25	7722	7581	7445	7313	7185	7061	6940	6822	6707	6596	6487	6381
26	7719	7579	7443	7311	7183	7059	6938	6820	6706	6594	6485	6379
27	7717	7577	7441	7309	7181	7057	6936	6818	6704	6592	6484	6377
28	7714	7574	7438	7307	7179	7054	6934	6816	6702	6590	6482	6376
29	7712	7572	7436	7304	7177	7052	6932	6814	6700	6589	6480	6374
30	7710	7570	7434	7302	7175	7050	6930	6812	6698	6587	6478	6372
31	7707	7567	7432	7300	7172	7048	6928	6810	6696	6585	6476	6370
32	7705	7565	7429	7298	7170	7046	6926	6809	6694	6583	6475	6369
33	7703	7563	7427	7296	7168	7044	6924	6807	6692	6581	6473	6367
34	7700	7560	7425	7294	7166	7042	6922	6805	6691	6579	6471	6365
35	7698	7558	7423	7291	7164	7040	6920	6803	6689	6578	6469	6363
36	7696	7556	7421	7289	7162	7038	6918	6801	6687	6576	6467	6362
37	7693	7554	7418	7287	7160	7036	6916	6799	6685	6574	6466	6360
38	7691	7551	7416	7285	7158	7034	6914	6797	6683	6572	6464	6358
39	7688	7549	7414	7283	7156	7032	6912	6795	6681	6570	6462	6357
40	7686	7547	7412	7281	7154	7030	6910	6793	6679	6568	6460	6355
41	7684	7544	7409	7279	7152	7028	6908	6791	6677	6567	6459	6353
42	7681	7542	7407	7276	7149	7026	6906	6789	6676	6565	6457	6351
43	7679	7540	7405	7274	7147	7024	6904	6787	6674	6563	6455	6350
44	7677	7538	7403	7272	7145	7022	6902	6785	6672	6561	6453	6348
45	7674	7535	7401	7270	7143	7020	6900	6784	6670	6559	6451	6346
46	7672	7533	7398	7268	7141	7018	6898	6782	6668	6557	6450	6344
47	7670	7531	7396	7266	7139	7016	6896	6780	6666	6556	6448	6343
48	7667	7528	7394	7264	7137	7014	6894	6778	6664	6554	6446	6341
49	7665	7526	7392	7261	7135	7012	6892	6776	6662	6552	6444	6339
50	7662	7524	7390	7259	7133	7010	6890	6774	6661	6550	6443	6338
51	7660	7522	7387	7257	7131	7008	6888	6772	6659	6548	6441	6336
52	7658	7519	7385	7255	7129	7006	6886	6770	6657	6547	6439	6334
53	7655	7517	7383	7253	7126	7004	6884	6768	6655	6545	6437	6332
54	7653	7515	7381	7251	7124	7002	6882	6766	6653	6543	6435	6331
55	7651	7513	7379	7249	7122	7000	6880	6764	6651	6541	6434	6329
56	7648	7510	7376	7246	7120	6998	6878	6762	6649	6539	6432	6327
57	*7646*	*7508*	*7374*	*7244*	*7118*	*6996*	*6877*	*6761*	*6648*	*6538*	*6430*	*6325*
58	*7644*	*7506*	*7372*	*7242*	*7116*	*6994*	*6875*	*6759*	*6646*	*6536*	*6428*	*6324*
59	*7641*	*7503*	*7370*	*7240*	*7114*	*6992*	*6873*	*6757*	*6644*	*6534*	*6427*	*6322*

Sec.	0 Hours or 0 Degrees.											
	42 m.	43 m.	44 m.	45 m.	46 m.	47 m.	48 m.	49 m.	50 m.	51 m.	52 m.	53 m.
0	6320	6218	6118	6021	5925	5832	5740	5651	5563	5477	5393	5310
1	6318	6216	6117	6019	5924	5830	5739	5649	5562	5476	5391	5309
2	6317	6215	6115	6017	5922	5829	5737	5648	5560	5474	5390	5307
3	6315	6213	6113	6016	5920	5827	5736	5646	5559	5473	5389	5306
4	6313	6211	6111	6014	5919	5826	5734	5645	5557	5471	5387	5304
5	6312	6210	6110	6013	5917	5824	5733	5643	5556	5470	5386	5303
6	6310	6208	6108	6011	5916	5823	5731	5642	5554	5469	5384	5302
7	6308	6206	6107	6009	5914	5821	5730	5640	5553	5467	5383	5300
8	6306	6205	6105	6008	5913	5819	5728	5639	5551	5466	5382	5299
9	6305	6203	6103	6006	5911	5818	5727	5637	5550	5464	5380	5298
10	6303	6201	6102	6004	5909	5816	5725	5636	5549	5463	5379	5296
11	6301	6200	6100	6003	5908	5815	5724	5634	5547	5461	5377	5295
12	6300	6198	6099	6001	5906	5813	5722	5633	5546	5460	5376	5294
13	6298	6196	6097	6000	5905	5812	5721	5632	5544	5459	5375	5292
14	6296	6194	6095	5998	5903	5810	5719	5630	5543	5457	5373	5291
15	6294	6193	6094	5997	5902	5809	5718	5629	5541	5456	5372	5290
16	6293	6191	6092	5995	5900	5807	5716	5627	5540	5454	5370	5288
17	6291	6189	6090	5993	5898	5806	5715	5626	5538	5453	5369	5287
18	6289	6188	6089	5992	5897	5804	5713	5624	5537	5452	5368	5285
19	6288	6186	6087	5990	5895	5803	5712	5623	5536	5450	5366	5284
20	6286	6184	6085	5988	5894	5801	5710	5621	5534	5449	5365	5283
21	6284	6183	6084	5987	5892	5800	5709	5620	5533	5447	5364	5281
22	6282	6181	6082	5985	5891	5798	5707	5618	5531	5446	5362	5280
23	6281	6179	6080	5984	5889	5796	5706	5617	5530	5444	5361	5279
24	6279	6178	6079	5982	5888	5795	5704	5615	5528	5443	5359	5277
25	6277	6176	6077	5981	5886	5793	5703	5614	5527	5442	5358	5276
26	6276	6174	6076	5979	5884	5792	5701	5612	5525	5440	5357	5275
27	6274	6173	6074	5977	5883	5790	5700	5611	5524	5439	5355	5273
28	6272	6171	6072	5976	5881	5789	5698	5610	5523	5437	5354	5272
29	6270	6169	6071	5974	5880	5787	5697	5608	5521	5436	5352	5270
30	6269	6168	6069	5973	5878	5786	5695	5607	5520	5435	5351	5269
31	6267	6166	6067	5971	5877	5784	5694	5605	5518	5433	5350	5268
32	6265	6164	6066	5969	5875	5783	5692	5604	5517	5432	5348	5266
33	6264	6163	6064	5968	5874	5781	5691	5602	5516	5430	5347	5265
34	6262	6161	6063	5966	5872	5780	5689	5601	5514	5429	5346	5264
35	6260	6159	6061	5965	5870	5778	5688	5599	5513	5428	5344	5262
36	6259	6158	6059	5963	5869	5777	5686	5598	5511	5426	5343	5261
37	6257	6156	6058	5961	5867	5775	5685	5596	5510	5425	5341	5260
38	6255	6154	6056	5960	5866	5774	5683	5595	5508	5423	5340	5258
39	6254	6153	6055	5958	5864	5772	5682	5594	5507	5422	5339	5257
40	6252	6151	6053	5957	5863	5771	5680	5592	5505	5421	5337	5256
41	6250	6150	6051	5955	5861	5769	5679	5591	5504	5419	5336	5254
42	6248	6148	6050	5954	5860	5768	5677	5589	5503	5418	5335	5253
43	6247	6146	6048	5952	5858	5766	5676	5588	5501	5416	5333	5252
44	6245	6145	6046	5950	5856	5764	5674	5586	5500	5415	5332	5250
45	6243	6143	6045	5949	5855	5763	5673	5585	5498	5414	5331	5249
46	6242	6141	6043	5947	5853	5761	5671	5583	5497	5412	5329	5248
47	6240	6140	6042	5946	5852	5760	5670	5582	5495	5411	5328	5246
48	6238	6138	6040	5944	5850	5758	5669	5580	5494	5409	5326	5245
49	6237	6136	6038	5942	5849	5757	5667	5579	5493	5408	5325	5244
50	6235	6135	6037	5941	5847	5755	5666	5577	5491	5407	5324	5242
51	6233	6133	6035	5939	5846	5754	5664	5576	5490	5405	5322	5241
52	6231	6131	6033	5938	5844	5752	5663	5575	5488	5404	5321	5239
53	6230	6130	6032	5936	5842	5751	5661	5573	5487	5402	5319	5238
54	6228	6128	6030	5935	5841	5749	5660	5572	5486	5401	5318	5237
55	6226	6126	6029	5933	5839	5748	5658	5570	5484	5400	5317	5235
56	6225	6125	6027	5931	5838	5746	5657	5569	5483	5398	5315	5234
57	6223	6123	6025	5930	5836	5745	5655	5567	5481	5397	5314	5233
58	6221	6121	6024	5928	5835	5743	5654	5566	5480	5395	5313	5231
59	6220	6120	6022	5927	5833	5742	5652	5564	5478	5394	5311	5230

Sec.	0 Hours or 0 Degrees.						1 Hour or 1 Degree.					
	54 m.	55 m.	56 m.	57 m.	58 m.	59 m.	0 m.	1 m.	2 m.	3 m.	4 m.	5 m.
0	5229	5149	5071	4994	4918	4844	4771	4699	4629	4559	4491	4424
1	5227	5148	5070	4993	4917	4843	4770	4698	4627	4558	4490	4422
2	5226	5146	5068	4991	4916	4842	4769	4697	4626	4557	4489	4421
3	5225	5145	5067	4990	4915	4841	4768	4696	4625	4556	4488	4420
4	5223	5144	5066	4989	4913	4839	4766	4694	4624	4555	4486	4419
5	5222	5142	5064	4988	4912	4838	4765	4693	4623	4554	4485	4418
6	5221	5141	5063	4986	4911	4837	4764	4692	4622	4552	4484	4417
7	5219	5140	5062	4985	4910	4836	4763	4691	4620	4551	4483	4416
8	5218	5139	5060	4984	4908	4834	4762	4690	4619	4550	4482	4415
9	5217	5137	5059	4983	4907	4833	4760	4689	4618	4549	4481	4414
10	5215	5136	5058	4981	4906	4832	4759	4688	4617	4548	4480	4412
11	5214	5135	5057	4980	4905	4831	4758	4686	4616	4547	4478	4411
12	5213	5133	5055	4979	4903	4830	4757	4685	4615	4546	4477	4410
13	5211	5132	5054	4977	4902	4828	4756	4684	4614	4544	4476	4409
14	5210	5131	5053	4976	4901	4827	4754	4683	4612	4543	4475	4408
15	5209	5129	5051	4975	4900	4826	4753	4682	4611	4542	4474	4407
16	5207	5128	5050	4974	4898	4824	4752	4680	4610	4541	4473	4406
17	5206	5127	5049	4972	4897	4823	4751	4679	4609	4540	4472	4405
18	5205	5125	5048	4971	4896	4822	4750	4678	4608	4539	4471	4404
19	5203	5124	5046	4970	4895	4821	4748	4677	4607	4537	4469	4402
20	5202	5123	5045	4969	4894	4820	4747	4676	4605	4536	4468	4401
21	5201	5122	5044	4967	4892	4819	4746	4675	4604	4535	4467	4400
22	5199	5120	5042	4966	4891	4817	4745	4673	4603	4534	4466	4399
23	5198	5119	5041	4965	4890	4816	4744	4672	4602	4533	4465	4398
24	5197	5118	5040	4964	4889	4815	4742	4671	4601	4532	4464	4397
25	5195	5116	5039	4962	4887	4814	4741	4670	4600	4531	4463	4396
26	5194	5115	5037	4961	4886	4812	4740	4669	4599	4529	4462	4395
27	5193	5114	5036	4960	4885	4811	4739	4668	4597	4528	4460	4394
28	5191	5112	5035	4959	4884	4810	4737	4666	4596	4527	4459	4392
29	5190	5111	5033	4957	4882	4809	4736	4665	4595	4526	4458	4391
30	5189	5110	5032	4956	4881	4808	4735	4664	4594	4525	4457	4390
31	5187	5108	5031	4955	4880	4806	4734	4663	4593	4524	4456	4389
32	5186	5107	5030	4953	4879	4805	4733	4662	4592	4523	4455	4388
33	5185	5106	5028	4952	4877	4804	4732	4660	4590	4522	4454	4387
34	5183	5105	5027	4951	4876	4803	4730	4659	4589	4520	4453	4386
35	5182	5103	5026	4950	4875	4801	4729	4658	4588	4519	4451	4385
36	5181	5102	5025	4949	4874	4800	4728	4657	4587	4518	4450	4384
37	5179	5101	5023	4947	4872	4799	4727	4656	4586	4517	4449	4382
38	5178	5099	5022	4946	4871	4798	4726	4655	4585	4516	4448	4381
39	5177	5098	5021	4945	4870	4797	4724	4653	4584	4515	4447	4380
40	5175	5097	5019	4943	4869	4795	4723	4652	4582	4514	4446	4379
41	5174	5095	5018	4942	4868	4794	4722	4651	4581	4512	4445	4378
42	5173	5094	5017	4941	4866	4793	4721	4650	4580	4511	4444	4377
43	5171	5093	5016	4940	4865	4792	4720	4649	4579	4510	4443	4376
44	5170	5092	5014	4938	4864	4791	4718	4647	4578	4509	4441	4375
45	5169	5090	5013	4937	4863	4789	4717	4646	4577	4508	4440	4374
46	5167	5089	5012	4936	4861	4788	4716	4645	4575	4507	4439	4373
47	5166	5088	5010	4935	4860	4787	4715	4644	4574	4506	4438	4372
48	5165	5086	5009	4933	4859	4786	4714	4643	4573	4505	4437	4370
49	5163	5085	5008	4932	4858	4784	4712	4642	4572	4503	4436	4369
50	5162	5084	5007	4931	4856	4783	4711	4640	4571	4502	4435	4368
51	5161	5082	5005	4930	4855	4782	4710	4639	4570	4501	4434	4367
52	5159	5081	5004	4928	4854	4781	4709	4638	4568	4500	4432	4366
53	5158	5080	5003	4927	4853	4780	4708	4637	4567	4499	4431	4365
54	5157	5079	5002	4926	4852	4778	4707	4636	4566	4498	4430	4364
55	5156	5077	5000	4925	4850	4777	4705	4635	4565	4497	4429	4363
56	5154	5076	4999	4923	4849	4776	4704	4633	4564	4495	4428	4362
57	*5153*	*5075*	4998	4922	4848	4775	4703	4632	4563	4494	4427	4361
58	*5152*	*5073*	4996	4921	4846	4774	4702	4631	4562	4493	4426	4359
59	*5150*	*5072*	4995	4920	4845	4772	4701	4630	4560	4492	4425	4358

Sec.	1 Hour or 1 Degree.											
	6 m.	7 m.	8 m.	9 m.	10 m.	11 m.	12 m.	13 m.	14 m.	15 m.	16 m.	17 m.
0	4357	4292	4228	4164	4102	4040	3979	3919	3860	3802	3745	3688
1	4356	4291	4227	4163	4101	4039	3978	3918	3859	3801	3744	3687
2	4355	4290	4225	4162	4100	4038	3977	3917	3858	3800	3743	3686
3	4354	4289	4224	4161	4099	4037	3976	3917	3857	3799	3742	3685
4	4353	4288	4223	4160	4098	4036	3975	3916	3856	3798	3741	3684
5	4352	4287	4222	4159	4097	4035	3974	3915	3855	3797	3740	3683
6	4351	4285	4221	4158	4096	4034	3973	3914	3855	3796	3739	3682
7	4350	4284	4220	4157	4094	4033	3972	3913	3854	3795	3738	3681
8	4348	4283	4219	4156	4093	4032	3971	3912	3853	3794	3737	3680
9	4347	4282	4218	4155	4092	4031	3970	3911	3852	3793	3736	3679
10	4346	4281	4217	4154	4091	4030	3969	3910	3851	3792	3735	3678
11	4345	4280	4216	4153	4090	4029	3968	3909	3850	3791	3734	3677
12	4344	4279	4215	4152	4089	4028	3967	3908	3849	3791	3733	3677
13	4343	4278	4214	4151	4088	4027	3966	3907	3848	3790	3732	3676
14	4342	4277	4213	4150	4087	4026	3965	3906	3847	3789	3731	3675
15	4341	4276	4212	4149	4086	4025	3964	3905	3846	3788	3730	3674
16	4340	4275	4211	4147	4085	4024	3963	3904	3845	3787	3729	3673
17	4339	4274	4210	4146	4084	4023	3962	3903	3844	3786	3728	3672
18	4338	4273	4209	4145	4083	4022	3961	3902	3843	3785	3727	3671
19	4336	4271	4207	4144	4082	4021	3960	3901	3842	3784	3726	3670
20	4335	4270	4206	4143	4081	4020	3959	3900	3841	3783	3726	3669
21	4334	4269	4205	4142	4080	4019	3958	3899	3840	3782	3725	3668
22	4333	4268	4204	4141	4079	4018	3957	3898	3839	3781	3724	3667
23	4332	4267	4203	4140	4078	4017	3956	3897	3838	3780	3723	3666
24	4331	4266	4202	4139	4077	4016	3955	3896	3837	3779	3722	3665
25	4330	4265	4201	4138	4076	4015	3954	3895	3836	3778	3721	3664
26	4329	4264	4200	4137	4075	4014	3953	3894	3835	3777	3720	3663
27	4328	4263	4199	4136	4074	4013	3952	3893	3834	3776	3719	3663
28	4327	4262	4198	4135	4073	4012	3951	3892	3833	3775	3718	3662
29	4326	4261	4197	4134	4072	4011	3950	3891	3832	3774	3717	3661
30	4325	4260	4196	4133	4071	4010	3949	3890	3831	3773	3716	3660
31	4323	4259	4195	4132	4070	4009	3948	3889	3830	3772	3715	3659
32	4322	4257	4194	4131	4069	4008	3947	3888	3829	3771	3714	3658
33	4321	4256	4193	4130	4068	4007	3946	3887	3828	3770	3713	3657
34	4320	4255	4192	4129	4067	4006	3945	3886	3827	3769	3712	3656
35	4319	4254	4190	4128	4066	4005	3944	3885	3826	3768	3711	3655
36	4318	4253	4189	4127	4065	4004	3943	3884	3825	3768	3710	3654
37	4317	4252	4188	4126	4064	4003	3942	3883	3824	3767	3709	3653
38	4316	4251	4187	4125	4063	4002	3941	3882	3823	3766	3708	3652
39	4315	4250	4186	4124	4062	4001	3940	3881	3822	3765	3708	3651
40	4314	4249	4185	4122	4061	4000	3939	3880	3821	3764	3707	3650
41	4313	4248	4184	4121	4060	3999	3938	3879	3820	3763	3706	3649
42	4311	4247	4183	4120	4059	3998	3937	3878	3820	3762	3705	3649
43	4310	4246	4182	4119	4057	3997	3936	3877	3819	3761	3704	3648
44	4309	4245	4181	4118	4056	3996	3935	3876	3818	3760	3703	3647
45	4308	4244	4180	4117	4055	3995	3934	3875	3817	3759	3702	3646
46	4307	4243	4179	4116	4054	3993	3933	3874	3816	3758	3701	3645
47	4306	4241	4178	4115	4053	3992	3932	3873	3815	3757	3700	3644
48	4305	4240	4177	4114	4052	3991	3931	3872	3814	3756	3699	3643
49	4304	4239	4176	4113	4051	3990	3930	3871	3813	3755	3698	3642
50	4303	4238	4175	4112	4050	3989	3929	3870	3812	3754	3697	3641
51	4302	4237	4174	4111	4049	3988	3928	3869	3811	3753	3696	3640
52	4301	4236	4173	4110	4048	3987	3927	3868	3810	3752	3695	3639
53	4299	4235	4172	4109	4047	3986	3926	3867	3809	3751	3694	3638
54	4298	4234	4171	4108	4046	3985	3925	3866	3808	3750	3693	3637
55	4297	4233	4169	4107	4045	3984	3924	3865	3807	3749	3692	3636
56	4296	4232	4168	4106	4044	3983	3923	3864	3806	3748	3691	3635
57	4295	4231	4167	4105	4043	3982	3922	3863	3805	3747	3690	3634
58	4294	4230	4166	4104	4042	3981	3921	3862	3804	3746	3689	3633
59	4293	4229	4165	4103	4041	3980	3920	3861	3803	3745	3688	3633

Sec.	1 Hour or 1 Degree.											
	18 m.	19 m.	20 m.	21 m.	22 m.	23 m.	24 m.	25 m.	26 m.	27 m.	28 m.	29 m.
0	3632	3576	3522	3468	3415	3362	3310	3259	3208	3158	3108	3059
1	3631	3575	3521	3467	3414	3361	3309	3258	3207	3157	3107	3058
2	3630	3575	3520	3466	3413	3360	3308	3257	3206	3156	3106	3057
3	3629	3574	3519	3465	3412	3359	3307	3256	3205	3155	3105	3056
4	3628	3573	3518	3464	3411	3358	3306	3255	3204	3154	3105	3056
5	3627	3572	3517	3463	3410	3358	3306	3254	3203	3153	3104	3055
6	3626	3571	3516	3463	3409	3357	3305	3253	3203	3153	3103	3054
7	3625	3570	3515	3462	3408	3356	3304	3253	3202	3152	3102	3053
8	3624	3569	3515	3461	3407	3355	3303	3252	3201	3151	3101	3052
9	3623	3568	3514	3460	3407	3354	3302	3251	3200	3150	3101	3052
10	3622	3567	3513	3459	3406	3353	3301	3250	3199	3149	3100	3051
11	3622	3566	3512	3458	3405	3352	3300	3249	3198	3148	3099	3050
12	3621	3565	3511	3457	3404	3351	3300	3248	3198	3148	3098	3049
13	3620	3565	3510	3456	3403	3351	3299	3247	3197	3147	3097	3048
14	3619	3564	3509	3455	3402	3350	3298	3247	3196	3146	3097	3047
15	3618	3563	3508	3454	3401	3349	3297	3246	3195	3145	3096	3047
16	3617	3562	3507	3454	3400	3348	3296	3245	3194	3144	3095	3046
17	3616	3561	3506	3453	3400	3347	3295	3244	3193	3143	3094	3045
18	3615	3560	3506	3452	3399	3346	3294	3243	3193	3143	3093	3044
19	3614	3559	3505	3451	3398	3345	3294	3242	3192	3142	3092	3043
20	3613	3558	3504	3450	3397	3344	3293	3241	3191	3141	3091	3043
21	3612	3557	3503	3449	3396	3344	3292	3241	3190	3140	3091	3042
22	3611	3556	3502	3448	3395	3343	3291	3240	3189	3139	3090	3041
23	3610	3555	3501	3447	3394	3342	3290	3239	3188	3138	3089	3040
24	3610	3555	3500	3446	3393	3341	3289	3238	3188	3138	3088	3039
25	3609	3554	3499	3446	3393	3340	3288	3237	3187	3137	3087	3038
26	3608	3553	3498	3445	3392	3339	3287	3236	3186	3136	3087	3038
27	3607	3552	3497	3444	3391	3338	3287	3236	3185	3135	3086	3037
28	3606	3551	3496	3443	3390	3338	3286	3235	3184	3134	3085	3036
29	3605	3550	3496	3442	3389	3337	3285	3234	3183	3133	3084	3035
30	3604	3549	3495	3441	3388	3336	3284	3233	3183	3133	3083	3034
31	3603	3548	3494	3440	3387	3335	3283	3232	3182	3132	3082	3034
32	3602	3547	3493	3439	3386	3334	3282	3231	3181	3131	3082	3033
33	3601	3546	3492	3438	3386	3333	3282	3231	3180	3130	3081	3032
34	3600	3545	3491	3438	3385	3332	3281	3230	3179	3129	3080	3031
35	3599	3544	3490	3437	3384	3331	3280	3229	3178	3128	3079	3030
36	3598	3544	3489	3436	3383	3331	3279	3228	3178	3128	3078	3030
37	3598	3543	3488	3435	3382	3330	3278	3227	3177	3127	3078	3029
38	3597	3542	3488	3434	3381	3329	3277	3226	3176	3126	3077	3028
39	3596	3541	3487	3433	3380	3328	3276	3225	3175	3125	3076	3027
40	3595	3540	3486	3432	3379	3327	3276	3225	3174	3124	3075	3026
41	3594	3539	3485	3431	3378	3326	3275	3224	3173	3124	3074	3026
42	3593	3538	3484	3431	3378	3325	3274	3223	3173	3123	3073	3025
43	3592	3537	3483	3430	3377	3325	3273	3222	3172	3122	3073	3024
44	3591	3536	3482	3429	3376	3324	3272	3221	3171	3121	3072	3023
45	3590	3535	3481	3428	3375	3323	3271	3220	3170	3120	3071	3022
46	3589	3534	3480	3427	3374	3322	3270	3219	3169	3119	3070	3022
47	3588	3533	3479	3426	3373	3321	3270	3219	3168	3119	3069	3021
48	3587	3533	3479	3425	3372	3320	3269	3218	3168	3118	3069	3020
49	3586	3532	3478	3424	3371	3319	3268	3217	3167	3117	3068	3019
50	3586	3531	3477	3423	3371	3319	3267	3216	3166	3116	3067	3018
51	3585	3530	3476	3423	3370	3318	3266	3215	3165	3115	3066	3018
52	3584	3529	3475	3422	3369	3317	3265	3214	3164	3114	3065	3017
53	3583	3528	3474	3421	3368	3316	3264	3214	3163	3114	3064	3016
54	3582	3527	3473	3420	3367	3315	3264	3213	3163	3113	3064	3015
55	3581	3526	3472	3419	3366	3314	3263	3212	3162	3112	3063	3014
56	3580	3525	3471	3418	3365	3313	3262	3211	3161	3111	3062	3013
57	3579	3525	3471	3417	3365	3313	3261	3210	3160	3110	3061	3013
58	3578	3524	3470	3416	3364	3312	3260	3209	3159	3109	3060	3012
59	3577	3523	3469	3415	3363	3311	3259	3209	3158	3109	3060	3011

Sec.	1 Hour or 1 Degree.											
	30 m.	31 m.	32 m.	33 m.	34 m.	35 m.	36 m.	37 m.	38 m.	39 m.	40 m.	41 m.
0	3010	2962	2915	2868	2821	2775	2730	2685	2640	2596	2553	2510
1	3009	2961	2914	2867	2821	2775	2729	2684	2640	2596	2552	2509
2	3009	2961	2913	2866	2820	2774	2728	2683	2639	2595	2551	2508
3	3008	2960	2912	2866	2819	2773	2728	2683	2638	2594	2551	2507
4	3007	2959	2912	2865	2818	2772	2727	2682	2637	2593	2550	2507
5	3006	2958	2911	2864	2818	2772	2726	2681	2637	2593	2549	2506
6	3005	2958	2910	2863	2817	2771	2725	2681	2636	2592	2548	2505
7	3005	2957	2909	2862	2816	2770	2725	2680	2635	2591	2548	2504
8	3004	2956	2909	2862	2815	2769	2724	2679	2634	2590	2547	2504
9	3003	2955	2908	2861	2815	2769	2723	2678	2634	2590	2546	2503
10	3002	2954	2907	2860	2814	2768	2722	2678	2633	2589	2545	2502
11	3001	2954	2906	2859	2813	2767	2722	2677	2632	2588	2545	2502
12	3001	2953	2905	2859	2812	2766	2721	2676	2632	2588	2544	2501
13	3000	2952	2905	2858	2811	2766	2720	2675	2631	2587	2543	2500
14	2999	2951	2904	2857	2811	2765	2719	2675	2630	2586	2543	2499
15	2998	2950	2903	2856	2810	2764	2719	2674	2629	2585	2542	2499
16	2997	2950	2902	2855	2809	2763	2718	2673	2629	2585	2541	2498
17	2997	2949	2901	2855	2808	2763	2717	2672	2628	2584	2540	2497
18	2996	2948	2901	2854	2808	2762	2716	2672	2627	2583	2540	2497
19	2995	2947	2900	2853	2807	2761	2716	2671	2626	2582	2539	2496
20	2994	2946	2899	2852	2806	2760	2715	2670	2626	2582	2538	2495
21	2993	2946	2898	2852	2805	2760	2714	2669	2625	2581	2538	2494
22	2993	2945	2898	2851	2804	2759	2713	2669	2624	2580	2537	2494
23	2992	2944	2897	2850	2804	2758	2713	2668	2623	2580	2536	2493
24	2991	2943	2896	2849	2803	2757	2712	2667	2623	2579	2535	2492
25	2990	2942	2895	2848	2802	2756	2711	2666	2622	2578	2535	2492
26	2989	2942	2894	2848	2801	2756	2710	2666	2621	2577	2534	2491
27	2989	2941	2894	2847	2801	2755	2710	2665	2621	2577	2533	2490
28	2988	2940	2893	2846	2800	2754	2709	2664	2620	2576	2532	2489
29	2987	2939	2892	2845	2799	2753	2708	2663	2619	2575	2532	2489
30	2986	2939	2891	2845	2798	2753	2707	2663	2618	2574	2531	2488
31	2985	2938	2890	2844	2798	2752	2707	2662	2618	2574	2530	2487
32	2985	2937	2890	2843	2797	2751	2706	2661	2617	2573	2530	2487
33	2984	2936	2889	2842	2796	2750	2705	2660	2616	2572	2529	2486
34	2983	2935	2888	2841	2795	2750	2704	2660	2615	2572	2528	2485
35	2982	2935	2887	2841	2795	2749	2704	2659	2615	2571	2527	2484
36	2981	2934	2887	2840	2794	2748	2703	2658	2614	2570	2527	2484
37	2981	2933	2886	2839	2793	2747	2702	2657	2613	2569	2526	2483
38	2980	2932	2885	2838	2792	2747	2701	2657	2612	2569	2525	2482
39	2979	2931	2884	2838	2792	2746	2701	2656	2612	2568	2525	2482
40	2978	2931	2883	2837	2791	2745	2700	2655	2611	2567	2524	2481
41	2977	2930	2883	2836	2790	2744	2699	2654	2610	2566	2523	2480
42	2977	2929	2882	2835	2789	2744	2698	2654	2610	2566	2522	2480
43	2976	2928	2881	2835	2788	2743	2698	2653	2609	2565	2522	2479
44	2975	2927	2880	2834	2788	2742	2697	2652	2608	2564	2521	2478
45	2974	2927	2880	2833	2787	2741	2696	2652	2607	2564	2520	2477
46	2973	2926	2879	2832	2786	2741	2695	2651	2607	2563	2520	2477
47	2973	2925	2878	2831	2785	2740	2695	2650	2606	2562	2519	2476
48	2972	2924	2877	2831	2785	2739	2694	2649	2605	2561	2518	2475
49	2971	2923	2876	2830	2784	2738	2693	2649	2604	2561	2517	2474
50	2970	2923	2876	2829	2783	2738	2692	2648	2604	2560	2517	2474
51	2969	2922	2875	2828	2782	2737	2692	2647	2603	2559	2516	2473
52	2969	2921	2874	2828	2782	2736	2691	2646	2602	2558	2515	2472
53	2968	2920	2873	2827	2781	2735	2690	2646	2601	2558	2514	2472
54	2967	2920	2873	2826	2780	2735	2689	2645	2601	2557	2514	2471
55	2966	2919	2872	2825	2779	2734	2689	2644	2600	2556	2513	2470
56	2965	2918	2871	2824	2778	2733	2688	2643	2599	2556	2512	2470
57	2965	2917	2870	2824	2778	2732	2687	2643	2599	2555	2512	2469
58	2964	2916	2869	2823	2777	2731	2686	2642	2598	2554	2511	2468
59	2963	2916	2869	2822	2776	2731	2686	2641	2597	2553	2510	2467

Sec.	1 Hour or 1 Degree.											
	42 m.	43 m.	44 m.	45 m.	46 m.	47 m.	48 m.	49 m.	50 m.	51 m.	52 m.	53 m.
0	2467	2424	2382	2341	2300	2259	2218	2178	2139	2099	2061	2022
1	2466	2424	2382	2340	2299	2258	2218	2178	2138	2099	2060	2021
2	2465	2423	2381	2339	2298	2257	2217	2177	2137	2098	2059	2021
3	2465	2422	2380	2339	2298	2257	2216	2176	2137	2098	2059	2020
4	2464	2421	2380	2338	2297	2256	2216	2176	2136	2097	2058	2019
5	2463	2421	2379	2337	2296	2255	2215	2175	2135	2096	2057	2019
6	2462	2420	2378	2337	2296	2255	2214	2174	2135	2096	2057	2018
7	2462	2419	2378	2336	2295	2254	2214	2174	2134	2095	2056	2017
8	2461	2419	2377	2335	2294	2253	2213	2173	2133	2094	2055	2017
9	2460	2418	2376	2335	2294	2253	2212	2172	2133	2094	2055	2016
10	2460	2417	2375	2334	2293	2252	2212	2172	2132	2093	2054	2016
11	2459	2417	2375	2333	2292	2251	2211	2171	2132	2092	2053	2015
12	2458	2416	2374	2333	2291	2251	2210	2170	2131	2092	2053	2014
13	2457	2415	2373	2332	2291	2250	2210	2170	2130	2091	2052	2014
14	2457	2414	2373	2331	2290	2249	2209	2169	2130	2090	2051	2013
15	2456	2414	2372	2331	2289	2249	2208	2169	2129	2090	2051	2012
16	2455	2413	2371	2330	2289	2248	2208	2168	2128	2089	2050	2012
17	2455	2412	2371	2329	2288	2247	2207	2167	2128	2088	2050	2011
18	2454	2412	2370	2328	2287	2247	2206	2167	2127	2088	2049	2010
19	2453	2411	2369	2328	2287	2246	2206	2166	2126	2087	2048	2010
20	2453	2410	2368	2327	2286	2245	2205	2165	2126	2086	2048	2009
21	2452	2410	2368	2326	2285	2245	2204	2165	2125	2086	2047	2009
22	2451	2409	2367	2326	2285	2244	2204	2164	2124	2085	2046	2008
23	2450	2408	2366	2325	2284	2243	2203	2163	2124	2084	2046	2007
24	2450	2408	2366	2324	2283	2243	2202	2163	2123	2084	2045	2007
25	2449	2407	2365	2324	2283	2242	2202	2162	2122	2083	2044	2006
26	2448	2406	2364	2323	2282	2241	2201	2161	2122	2083	2044	2005
27	2448	2405	2364	2322	2281	2241	2200	2161	2121	2082	2043	2005
28	2447	2405	2363	2322	2281	2240	2200	2160	2120	2081	2042	2004
29	2446	2404	2362	2321	2280	2239	2199	2159	2120	2081	2042	2003
30	2445	2403	2362	2320	2279	2239	2198	2159	2119	2080	2041	2003
31	2445	2403	2361	2319	2279	2238	2198	2158	2118	2079	2041	2002
32	2444	2402	2360	2319	2278	2237	2197	2157	2118	2079	2040	2001
33	2443	2401	2359	2318	2277	2237	2196	2157	2117	2078	2039	2001
34	2443	2400	2359	2317	2276	2236	2196	2156	2116	2077	2039	2000
35	2442	2400	2358	2317	2276	2235	2195	2155	2116	2077	2038	2000
36	2441	2399	2357	2316	2275	2235	2194	2155	2115	2076	2037	1999
37	2440	2398	2357	2315	2274	2234	2194	2154	2114	2075	2037	1998
38	2440	2398	2356	2315	2274	2233	2193	2153	2114	2075	2036	1998
39	2439	2397	2355	2314	2273	2233	2192	2153	2113	2074	2035	1997
40	2438	2396	2355	2313	2272	2232	2192	2152	2113	2073	2035	1996
41	2438	2396	2354	2313	2272	2231	2191	2151	2112	2073	2034	1996
42	2437	2395	2353	2312	2271	2231	2190	2151	2111	2072	2033	1995
43	2436	2394	2353	2311	2270	2230	2190	2150	2111	2071	2033	1994
44	2436	2394	2352	2311	2270	2229	2189	2149	2110	2071	2032	1994
45	2435	2393	2351	2300	2269	2229	2188	2149	2109	2070	2032	1993
46	2434	2392	2350	2309	2268	2228	2188	2148	2109	2070	2031	1993
47	2433	2391	2350	2308	2268	2227	2187	2147	2108	2069	2030	1992
48	2433	2391	2349	2308	2267	2227	2186	2147	2107	2068	2030	1991
49	2432	2390	2348	2307	2266	2226	2186	2146	2107	2068	2029	1991
50	2431	2389	2348	2306	2266	2225	2185	2145	2106	2067	2028	1990
51	2431	2389	2347	2306	2265	2225	2184	2145	2105	2066	2028	1989
52	2430	2388	2346	2305	2264	2224	2184	2144	2105	2066	2027	1989
53	2429	2387	2346	2304	2264	2223	2183	2143	2104	2065	2026	1988
54	2429	2387	2345	2304	2263	2223	2182	2143	2103	2064	2026	1987
55	2428	2386	2344	2303	2262	2222	2182	2142	2103	2064	2025	1987
56	2427	2385	2344	2302	2262	2221	2181	2141	2102	2063	2024	1986
57	*2426*	*2384*	2343	2302	2261	2220	2180	2141	2101	2062	2024	1986
58	*2426*	*2384*	2342	2301	2260	2220	2180	2140	2101	2062	2023	1985
59	*2425*	*2383*	2341	2300	2260	2219	2179	2139	2100	2061	2023	1984

Sec.	1 Hour or 1 Degree.						2 Hours or 2 Degrees.				
	54 m.	55 m.	56 m.	57 m.	58 m.	59 m.	0 m.	1 m.	2 m.	3 m.	4 m.
0	1984	1946	1908	1871	1834	1797	1761	1725	1689	1654	1619
1	1983	1945	1907	1870	1833	1797	1760	1724	1688	1653	1618
2	1982	1944	1907	1870	1833	1796	1760	1724	1688	1652	1617
3	1982	1944	1906	1869	1832	1795	1759	1723	1687	1652	1617
4	1981	1943	1906	1868	1831	1795	1758	1722	1687	1651	1616
5	1980	1943	1905	1868	1831	1794	1758	1722	1686	1651	1616
6	1980	1942	1904	1867	1830	1794	1757	1721	1686	1650	1615
7	1979	1941	1904	1867	1830	1793	1757	1721	1685	1650	1614
8	1979	1941	1903	1866	1829	1792	1756	1720	1684	1649	1614
9	1978	1940	1903	1865	1828	1792	1755	1719	1684	1648	1613
10	1977	1939	1902	1865	1828	1791	1755	1719	1683	1648	1613
11	1977	1939	1901	1864	1827	1791	1754	1718	1683	1647	1612
12	1976	1938	1901	1863	1827	1790	1754	1718	1682	1647	1612
13	1975	1938	1900	1863	1826	1789	1753	1717	1681	1646	1611
14	1975	1937	1899	1862	1825	1789	1752	1716	1681	1645	1610
15	1974	1936	1899	1862	1825	1788	1752	1716	1680	1645	1610
16	1973	1936	1898	1861	1824	1787	1751	1715	1680	1644	1609
17	1973	1935	1898	1860	1823	1787	1751	1715	1679	1644	1609
18	1972	1934	1897	1860	1823	1786	1750	1714	1678	1643	1608
19	1972	1934	1896	1859	1822	1786	1749	1713	1678	1642	1607
20	1971	1933	1896	1858	1822	1785	1749	1713	1677	1642	1607
21	1970	1933	1895	1858	1821	1785	1748	1712	1677	1641	1606
22	1970	1932	1894	1857	1820	1784	1748	1712	1676	1641	1606
23	1969	1931	1894	1857	1820	1783	1747	1711	1675	1640	1605
24	1968	1931	1893	1856	1819	1783	1746	1711	1675	1640	1605
25	1968	1930	1893	1855	1819	1782	1746	1710	1674	1639	1604
26	1967	1929	1892	1855	1818	1781	1745	1709	1674	1638	1603
27	1967	1929	1891	1854	1817	1781	1745	1709	1673	1638	1603
28	1966	1928	1891	1854	1817	1780	1744	1708	1673	1637	1602
29	1965	1927	1890	1853	1816	1780	1743	1708	1672	1637	1602
30	1965	1927	1889	1852	1816	1779	1743	1707	1671	1636	1601
31	1964	1926	1889	1852	1815	1778	1742	1706	1671	1635	1600
32	1963	1926	1888	1851	1814	1778	1742	1706	1670	1635	1600
33	1963	1925	1888	1850	1814	1777	1741	1705	1670	1634	1599
34	1962	1924	1887	1850	1813	1777	1740	1705	1669	1634	1599
35	1961	1924	1886	1849	1812	1776	1740	1704	1668	1633	1598
36	1961	1923	1886	1849	1812	1775	1739	1703	1668	1633	1598
37	1960	1922	1885	1848	1811	1775	1739	1703	1667	1632	1597
38	1960	1922	1884	1847	1811	1774	1738	1702	1667	1631	1596
39	1959	1921	1884	1847	1810	1774	1737	1702	1666	1631	1596
40	1958	1921	1883	1846	1809	1773	1737	1701	1665	1630	1595
41	1958	1920	1883	1846	1809	1772	1736	1700	1665	1630	1595
42	1957	1919	1882	1845	1808	1772	1736	1700	1664	1629	1594
43	1956	1919	1881	1844	1808	1771	1735	1699	1664	1628	1593
44	1956	1918	1881	1844	1807	1771	1734	1699	1663	1628	1593
45	1955	1918	1880	1843	1806	1770	1734	1698	1663	1627	1592
46	1955	1917	1879	1842	1806	1769	1733	1697	1662	1627	1592
47	1954	1916	1879	1842	1805	1769	1733	1697	1661	1626	1591
48	1953	1916	1878	1841	1805	1768	1732	1696	1661	1626	1591
49	1953	1915	1878	1841	1804	1768	1731	1696	1660	1625	1590
50	1952	1914	1877	1840	1803	1767	1731	1695	1660	1624	1589
51	1951	1914	1876	1839	1803	1766	1730	1694	1659	1624	1589
52	1951	1913	1876	1839	1802	1766	1730	1694	1658	1623	1588
53	1950	1912	1875	1838	1801	1765	1729	1693	1658	1623	1588
54	1950	1912	1875	1838	1801	1765	1728	1693	1657	1622	1587
55	1949	1911	1874	1837	1800	1764	1728	1692	1657	1621	1586
56	1948	1911	1873	1836	1800	1763	1727	1691	1656	1621	1586
57	1948	1910	1873	1836	1799	1763	1727	1691	1655	1620	1585
58	*1947*	*1909*	*1872*	*1835*	1798	1762	1726	1690	1655	1620	1585
59	*1946*	*1909*	*1871*	*1834*	1798	1761	1725	1690	1654	1619	1584

Sec.	2 Hours or 2 Degrees.										
	5 m.	6 m.	7 m.	8 m.	9 m.	10 m.	11 m.	12 m.	13 m.	14 m.	15 m.
0	1584	1549	1515	1481	1447	1413	1380	1347	1314	1282	1249
1	1583	1548	1514	1480	1446	1413	1379	1346	1314	1281	1249
2	1582	1548	1514	1479	1446	1412	1379	1346	1313	1281	1248
3	1582	1547	1513	1479	1445	1412	1378	1345	1313	1280	1248
4	1581	1547	1512	1478	1445	1411	1378	1345	1312	1279	1247
5	1581	1546	1512	1478	1444	1410	1377	1344	1311	1279	1247
6	1580	1546	1511	1477	1443	1410	1377	1344	1311	1278	1246
7	1580	1545	1511	1477	1443	1409	1376	1343	1310	1278	1246
8	1579	1544	1510	1476	1442	1409	1376	1343	1310	1277	1245
9	1578	1544	1510	1476	1442	1408	1375	1342	1309	1277	1245
10	1578	1543	1509	1475	1441	1408	1374	1341	1309	1276	1244
11	1577	1543	1508	1474	1441	1407	1374	1341	1308	1276	1243
12	1577	1542	1508	1474	1440	1407	1373	1340	1308	1275	1243
13	1576	1542	1507	1473	1440	1406	1373	1340	1307	1275	1242
14	1575	1541	1507	1473	1439	1405	1372	1339	1307	1274	1242
15	1575	1540	1506	1472	1438	1405	1372	1339	1306	1274	1241
16	1574	1540	1506	1472	1438	1404	1371	1338	1305	1273	1241
17	1574	1539	1505	1471	1437	1404	1371	1338	1305	1272	1240
18	1573	1539	1504	1470	1437	1403	1370	1337	1304	1272	1240
19	1573	1538	1504	1470	1436	1403	1369	1337	1304	1271	1239
20	1572	1538	1503	1469	1436	1402	1369	1336	1303	1271	1239
21	1571	1537	1503	1469	1435	1402	1368	1335	1303	1270	1238
22	1571	1536	1502	1468	1434	1401	1368	1335	1302	1270	1238
23	1570	1536	1502	1468	1434	1400	1367	1334	1302	1269	1237
24	1570	1535	1501	1467	1433	1400	1367	1334	1301	1269	1237
25	1569	1535	1500	1466	1433	1399	1366	1333	1301	1268	1236
26	1569	1534	1500	1466	1432	1399	1366	1333	1300	1268	1235
27	1568	1534	1499	1465	1432	1398	1365	1332	1300	1267	1235
28	1567	1533	1499	1465	1431	1398	1365	1332	1299	1267	1234
29	1567	1532	1498	1464	1431	1397	1364	1331	1298	1266	1234
30	1566	1532	1498	1464	1430	1397	1363	1331	1298	1266	1233
31	1566	1531	1497	1463	1429	1396	1363	1330	1297	1265	1233
32	1565	1531	1496	1463	1429	1395	1362	1329	1297	1264	1232
33	1565	1530	1496	1462	1428	1395	1362	1329	1296	1264	1232
34	1564	1529	1495	1461	1428	1394	1361	1328	1296	1263	1231
35	1563	1529	1495	1461	1427	1394	1361	1328	1295	1263	1231
36	1563	1528	1494	1460	1427	1393	1360	1327	1295	1262	1230
37	1562	1528	1494	1460	1426	1393	1360	1327	1294	1262	1230
38	1562	1527	1493	1459	1426	1392	1359	1326	1294	1261	1229
39	1561	1527	1493	1459	1425	1392	1359	1326	1293	1261	1229
40	1560	1526	1492	1458	1424	1391	1358	1325	1292	1260	1228
41	1560	1525	1491	1457	1424	1390	1357	1325	1292	1260	1227
42	1559	1525	1491	1457	1423	1390	1357	1324	1291	1259	1227
43	1559	1524	1490	1456	1423	1389	1356	1323	1291	1258	1226
44	1558	1524	1490	1456	1422	1389	1356	1323	1290	1258	1226
45	1558	1523	1489	1455	1422	1388	1355	1322	1290	1257	1225
46	1557	1523	1489	1455	1421	1388	1355	1322	1289	1257	1225
47	1556	1522	1488	1454	1420	1387	1354	1321	1289	1256	1224
48	1556	1522	1487	1454	1420	1387	1354	1321	1288	1256	1224
49	1555	1521	1487	1453	1419	1386	1353	1320	1288	1255	1223
50	1555	1520	1486	1452	1419	1386	1352	1320	1287	1255	1223
51	1554	1520	1486	1452	1418	1385	1352	1319	1287	1254	1222
52	1554	1519	1485	1451	1418	1384	1351	1319	1286	1254	1222
53	1553	1518	1485	1451	1417	1384	1351	1318	1285	1253	1221
54	1552	1518	1484	1450	1417	1383	1350	1317	1285	1253	1221
55	1552	1518	1483	1450	1416	1383	1350	1317	1284	1252	1220
56	1551	1517	1483	1449	1415	1382	1349	1316	1284	1251	1219
57	1551	1516	1482	1449	1415	1382	1349	1316	1283	1251	1219
58	1550	1516	1482	1448	1414	1381	1348	1315	1283	1250	1218
59	1550	1515	1481	1447	1414	1381	1347	1315	1282	1250	1218

Sec.	2 Hours or 2 Degrees.										
	16 m.	17 m.	18 m.	19 m.	20 m.	21 m.	22 m.	23 m.	24 m.	25 m.	26 m.
0	1217	1186	1154	1123	1091	1061	1030	0999	0969	0939	0909
1	1217	1185	1153	1122	1091	1060	1029	0999	0969	0939	0909
2	1216	1184	1153	1121	1090	1059	1029	0998	0968	0938	0908
3	1216	1184	1152	1121	1090	1059	1028	0998	0968	0938	0908
4	1215	1183	1152	1120	1089	1058	1028	0997	0967	0937	0907
5	1215	1183	1151	1120	1089	1058	1027	0997	0967	0937	0907
6	1214	1182	1151	1119	1088	1057	1027	0996	0966	0936	0906
7	1214	1182	1150	1119	1088	1057	1026	0996	0966	0936	0906
8	1213	1181	1150	1118	1087	1056	1026	0995	0965	0935	0905
9	**1213**	**1181**	**1149**	**1118**	**1087**	**1056**	**1025**	**0995**	**0965**	**0935**	**0905**
10	1212	1180	1149	1117	1086	1055	1025	0994	0964	0934	0904
11	1211	1180	1148	1117	1086	1055	1024	0994	0964	0934	0904
12	1211	1179	1148	1116	1085	1054	1024	0993	0963	0933	0903
13	1210	1179	1147	1116	1085	1054	1023	0993	0963	0933	0903
14	1210	1178	1147	1115	1084	1053	1023	0992	0962	0932	0902
15	1209	1178	1146	1115	1084	1053	1022	0992	0962	0932	0902
16	1209	1177	1146	1114	1083	1052	1022	0991	0961	0931	0901
17	1208	1177	1145	1114	1083	1052	1021	0991	0961	0931	0901
18	1208	1176	1145	1113	1082	1051	1021	0990	0960	0930	0900
19	**1207**	**1175**	**1144**	**1113**	**1082**	**1051**	**1020**	**0990**	**0960**	**0930**	**0900**
20	1207	1175	1143	1112	1081	1050	1020	0989	0959	0929	0899
21	1206	1174	1143	1112	1081	1050	1019	0989	0959	0929	0899
22	1206	1174	1142	1111	1080	1049	1019	0988	0958	0928	0898
23	1205	1173	1142	1111	1080	1049	1018	0988	0958	0928	0898
24	1205	1173	1141	1110	1079	1048	1018	0987	0957	0927	0897
25	1204	1172	1141	1110	1079	1048	1017	0987	0957	0927	0897
26	1203	1172	1140	1109	1078	1047	1017	0986	0956	0926	0896
27	1203	1171	1140	1109	1078	1047	1016	0986	0956	0926	0896
28	1202	1171	1139	1108	1077	1046	1016	0985	0955	0925	0895
29	**1202**	**1170**	**1139**	**1107**	**1076**	**1046**	**1015**	**0985**	**0955**	**0925**	**0895**
30	1201	1170	1138	1107	1076	1045	1015	0984	0954	0924	0894
31	1201	1169	1138	1106	1075	1045	1014	0984	0954	0924	0894
32	1200	1169	1137	1106	1075	1044	1014	0983	0953	0923	0893
33	1200	1168	1137	1105	1074	1044	1013	0983	0953	0923	0893
34	1199	1168	1136	1105	1074	1043	1013	0982	0952	0922	0892
35	1199	1167	1136	1104	1073	1043	1012	0982	0952	0922	0892
36	1198	1167	1135	1104	1073	1042	1012	0981	0951	0921	0891
37	1198	1166	1135	1103	1072	1042	1011	0981	0951	0921	0891
38	1197	1165	1134	1103	1072	1041	1010	0980	0950	0920	0890
39	**1197**	**1165**	**1134**	**1102**	**1071**	**1041**	**1010**	**0980**	**0950**	**0920**	**0890**
40	1196	1164	1133	1102	1071	1040	1009	0979	0949	0919	0889
41	1196	1164	1132	1101	1070	1039	1009	0979	0949	0919	0889
42	1195	1163	1132	1101	1070	1039	1008	0978	0948	0918	0888
43	1194	1163	1131	1100	1069	1038	1008	0978	0948	0918	0888
44	1194	1162	1131	1100	1069	1038	1007	0977	0947	0917	0887
45	1193	1162	1130	1099	1068	1037	1007	0977	0947	0917	0887
46	1193	1161	1130	1099	1068	1037	1006	0976	0946	0916	0886
47	1192	1161	1129	1098	1067	1036	1006	0976	0946	0916	0886
48	1192	1160	1129	1098	1067	1036	1005	0975	0945	0915	0885
49	**1191**	**1160**	**1128**	**1097**	**1066**	**1035**	**1005**	**0975**	**0945**	**0915**	**0885**
50	1191	1159	1128	1097	1066	1035	1004	0974	0944	0914	0884
51	1190	1159	1127	1096	1065	1034	1004	0974	0944	0914	0884
52	1190	1158	1127	1096	1065	1034	1003	0973	0943	0913	0883
53	1189	1158	1126	1095	1064	1033	1003	0973	0943	0913	0883
54	1189	1157	1126	1095	1064	1033	1002	0972	0942	0912	0882
55	1188	1157	1125	1094	1063	1032	1002	0972	0942	0912	0882
56	1188	1156	1125	1093	1063	1032	1001	0971	0941	0911	0881
57	1187	1156	1124	1093	1062	1031	1001	0971	0941	0911	0881
58	*1187*	*1155*	*1124*	*1092*	*1062*	*1031*	*1000*	*0970*	*0940*	*0910*	*0880*
59	*1186*	*1154*	*1123*	*1092*	*1061*	*1030*	*1000*	*0970*	*0940*	*0910*	*0880*

Sec.	2 Hours or 2 Degrees.										
	27 m.	28 m.	29 m.	30 m.	31 m.	32 m.	33 m.	34 m.	35 m.	36 m.	37 m.
0	0880	0850	0821	0792	0763	0734	0706	0678	0649	0621	0594
1	0879	0850	0820	0791	0762	0734	0705	0677	0649	0621	0593
2	0879	0849	0820	0791	0762	0733	0705	0677	0648	0621	0593
3	0878	0849	0819	0790	0762	0733	0704	0676	0648	0620	0592
4	0878	0848	0819	0790	0761	0732	0704	0676	0648	0620	0592
5	0877	0848	0818	0789	0761	0732	0703	0675	0647	0619	0591
6	0877	0847	0818	0789	0760	0731	0703	0675	0647	0619	0591
7	0876	0847	0817	0788	0760	0731	0702	0674	0646	0618	0590
8	0876	0846	0817	0788	0759	0730	0702	0674	0646	0618	0590
9	0875	0846	0816	0787	0759	0730	0702	0673	0645	0617	0590
10	0875	0845	0816	0787	0758	0729	0701	0673	0645	0617	0589
11	0874	0845	0815	0787	0758	0729	0701	0672	0644	0616	0589
12	0874	0844	0815	0786	0757	0729	0700	0672	0644	0616	0588
13	0873	0844	0815	0786	0757	0728	0700	0671	0643	0615	0588
14	0873	0843	0814	0785	0756	0728	0699	0671	0643	0615	0587
15	0872	0843	0814	0785	0756	0727	0699	0670	0642	0615	0587
16	0872	0842	0813	0784	0755	0727	0698	0670	0642	0614	0586
17	0871	0842	0813	0784	0755	0726	0698	0669	0641	0614	0586
18	0871	0841	0812	0783	0754	0726	0697	0669	0641	0613	0585
19	0870	0841	0812	0783	0754	0725	0697	0669	0641	0613	0585
20	0870	0840	0811	0782	0753	0725	0696	0668	0640	0612	0584
21	0869	0840	0811	0782	0753	0724	0696	0668	0640	0612	0584
22	0869	0839	0810	0781	0752	0724	0695	0667	0639	0611	0584
23	0868	0839	0810	0781	0752	0723	0695	0667	0639	0611	0583
24	0868	0838	0809	0780	0751	0723	0694	0666	0638	0610	0583
25	0867	0838	0809	0780	0751	0722	0694	0666	0638	0610	0582
26	0867	0837	0808	0779	0750	0722	0693	0665	0637	0609	0582
27	0866	0837	0808	0779	0750	0721	0693	0665	0637	0609	0581
28	0866	0836	0807	0778	0750	0721	0693	0664	0636	0608	0581
29	0865	0836	0807	0778	0749	0720	0692	0664	0636	0608	0580
30	0865	0835	0806	0777	0749	0720	0692	0663	0635	0608	0580
31	0864	0835	0806	0777	0748	0720	0691	0663	0635	0607	0579
32	0864	0834	0805	0776	0748	0719	0691	0662	0634	0607	0579
33	0863	0834	0805	0776	0747	0719	0690	0662	0634	0606	0579
34	0863	0833	0804	0775	0747	0718	0690	0662	0634	0606	0578
35	0862	0833	0804	0775	0746	0718	0689	0661	0633	0605	0578
36	0862	0833	0803	0774	0746	0717	0689	0661	0633	0605	0577
37	0861	0832	0803	0774	0745	0717	0688	0660	0632	0604	0577
38	0861	0832	0802	0773	0745	0716	0688	0660	0632	0604	0576
39	0860	0831	0802	0773	0744	0716	0687	0659	0631	0603	0576
40	0860	0831	0801	0773	0744	0715	0687	0659	0631	0603	0575
41	0859	0830	0801	0772	0743	0715	0686	0658	0630	0602	0575
42	0859	0830	0801	0772	0743	0714	0686	0658	0630	0602	0574
43	0858	0829	0800	0771	0742	0714	0685	0657	0629	0602	0574
44	0858	0829	0800	0771	0742	0713	0685	0657	0629	0601	0573
45	0857	0828	0799	0770	0741	0713	0685	0656	0628	0601	0573
46	0857	0828	0799	0770	0741	0712	0684	0656	0628	0600	0573
47	0856	0827	0798	0769	0740	0712	0684	0655	0627	0600	0572
48	0856	0827	0798	0769	0740	0711	0683	0655	0627	0599	0572
49	0855	0826	0797	0768	0739	0711	0683	0655	0627	0599	0571
50	0855	0826	0797	0768	0739	0711	0682	0654	0626	0598	0571
51	0855	0825	0796	0767	0739	0710	0682	0654	0626	0598	0570
52	0854	0825	0796	0767	0738	0710	0681	0653	0625	0597	0570
53	0854	0824	0795	0766	0738	0709	0681	0653	0625	0597	0569
54	0853	0824	0795	0766	0737	0709	0680	0652	0624	0596	0569
55	0853	0823	0794	0765	0737	0708	0680	0652	0624	0596	0568
56	0852	0823	0794	0765	0736	0708	0679	0651	0623	0596	0568
57	0852	0822	0793	0764	0736	0707	0679	0651	0623	0595	0568
58	0851	0822	0793	0764	0735	0707	0678	0650	0622	0595	0567
59	0851	0821	0792	0763	0735	0706	0678	0650	0622	0594	0567

Sec.	2 Hours or 2 Degrees.										
	38 m.	39 m.	40 m.	41 m.	42 m.	43 m.	44 m.	45 m.	46 m.	47 m.	48 m.
0	0566	0539	0512	0484	0458	0431	0404	0378	0352	0326	0300
1	0566	0538	0511	0484	0457	0430	0404	0377	0351	0325	0299
2	0565	0538	0511	0484	0457	0430	0403	0377	0351	0325	0299
3	0565	0537	0510	0483	0456	0430	0403	0377	0350	0324	0298
4	0564	0537	0510	0483	0456	0429	0402	0376	0350	0324	0298
5	0564	0536	0509	0482	0455	0429	0402	0376	0349	0323	0297
6	0563	0536	0509	0482	0455	0428	0402	0375	0349	0323	0297
7	0563	0536	0508	0481	0454	0428	0401	0375	0349	0322	0297
8	0562	0535	0508	0481	0454	0427	0401	0374	0348	0322	0296
9	**0562**	**0535**	**0507**	**0480**	**0454**	**0427**	**0400**	**0374**	**0348**	**0322**	**0296**
10	0562	0534	0507	0480	0453	0426	0400	0373	0347	0321	0295
11	0561	0534	0507	0479	0453	0426	0399	0373	0347	0321	0295
12	0561	0533	0506	0479	0452	0426	0399	0373	0346	0320	0294
13	0560	0533	0506	0479	0452	0425	0399	0372	0346	0320	0294
14	0560	0532	0505	0478	0451	0425	0398	0372	0346	0319	0294
15	0559	0532	0505	0478	0451	0424	0398	0371	0345	0319	0293
16	0559	0531	0504	0477	0450	0424	0397	0371	0345	0319	0293
17	0558	0531	0504	0477	0450	0423	0397	0370	0344	0318	0292
18	0558	0531	0503	0476	0450	0423	0396	0370	0344	0318	0292
19	**0557**	**0530**	**0503**	**0476**	**0449**	**0422**	**0396**	**0370**	**0343**	**0317**	**0291**
20	0557	0530	0502	0475	0449	0422	0395	0369	0343	0317	0291
21	0557	0529	0502	0475	0448	0422	0395	0369	0342	0316	0291
22	0556	0529	0502	0475	0448	0421	0395	0368	0342	0316	0290
23	0556	0528	0501	0474	0447	0421	0394	0368	0342	0316	0290
24	0555	0528	0501	0474	0447	0420	0394	0367	0341	0315	0289
25	0555	0527	0500	0473	0446	0420	0393	0367	0341	0315	0289
26	0554	0527	0500	0473	0446	0419	0393	0366	0340	0314	0288
27	0554	0526	0499	0472	0446	0419	0392	0366	0340	0314	0288
28	0553	0526	0499	0472	0445	0418	0392	0366	0339	0313	0288
29	**0553**	**0526**	**0498**	**0471**	**0445**	**0418**	**0391**	**0365**	**0339**	**0313**	**0287**
30	0552	0525	0498	0471	0444	0418	0391	0365	0339	0313	0287
31	0552	0525	0497	0471	0444	0417	0391	0364	0338	0312	0286
32	0551	0524	0497	0470	0443	0417	0390	0364	0338	0312	0286
33	0551	0524	0497	0470	0443	0416	0390	0363	0337	0311	0285
34	0551	0523	0496	0469	0442	0416	0389	0363	0337	0311	0285
35	0550	0523	0496	0469	0442	0415	0389	0363	0336	0310	0285
36	0550	0522	0495	0468	0442	0415	0388	0362	0336	0310	0284
37	0549	0522	0495	0468	0441	0414	0388	0362	0336	0310	0284
38	0549	0521	0494	0467	0441	0414	0388	0361	0335	0309	0283
39	**0548**	**0521**	**0494**	**0467**	**0440**	**0414**	**0387**	**0361**	**0335**	**0309**	**0283**
40	0548	0521	0493	0466	0440	0413	0387	0360	0334	0308	0282
41	0547	0520	0493	0466	0439	0413	0386	0360	0334	0308	0282
42	0547	0520	0493	0466	0439	0412	0386	0359	0333	0307	0282
43	0546	0519	0492	0465	0438	0412	0385	0359	0333	0307	0281
44	0546	0519	0492	0465	0438	0411	0385	0359	0332	0306	0281
45	0546	0518	0491	0464	0438	0411	0384	0358	0332	0306	0280
46	0545	0518	0491	0464	0437	0410	0384	0358	0332	0306	0280
47	0545	0517	0490	0463	0437	0410	0384	0357	0331	0305	0279
48	0544	0517	0490	0463	0436	0410	0383	0357	0331	0305	0279
49	**0544**	**0516**	**0489**	**0462**	**0436**	**0409**	**0383**	**0356**	**0330**	**0304**	**0279**
50	0543	0516	0489	0462	0435	0409	0382	0356	0330	0304	0278
51	0543	0516	0489	0462	0435	0408	0382	0356	0329	0304	0278
52	0542	0515	0488	0461	0434	0408	0381	0355	0329	0303	0277
53	0542	0515	0488	0461	0434	0407	0381	0355	0329	0303	0277
54	0541	0514	0487	0460	0434	0407	0381	0354	0328	0302	0276
55	0541	0514	0487	0460	0433	0406	0380	0354	0328	0302	0276
56	0541	0513	0486	0459	0433	0406	0380	0353	0327	0301	0276
57	0540	0513	0486	0459	0432	0406	0379	0353	0327	0301	0275
58	0540	0512	0485	0458	0432	0405	0379	0352	0326	0300	0275
59	*0539*	*0512*	*0485*	*0458*	*0431*	*0405*	*0378*	*0352*	*0326*	*0300*	*0274*

Sec.	2 Hours or 2 Degrees.										
	49 m.	50 m.	51 m.	52 m.	53 m.	54 m.	55 m.	56 m.	57 m.	58 m.	59 m.
0	0274	0248	0223	0197	0172	0147	0122	0098	0073	0049	0024
1	0273	0248	0222	0197	0172	0147	0122	0097	0073	0048	0024
2	0273	0247	0222	0197	0171	0146	0121	0097	0072	0048	0023
3	0273	0247	0221	0196	0171	0146	0121	0096	0072	0047	0023
4	0272	0246	0221	0196	0171	0146	0121	0096	0071	0047	0023
5	0272	0246	0221	0195	0170	0145	0120	0096	0071	0046	0022
6	0271	0246	0220	0195	0170	0145	0120	0095	0071	0046	0022
7	0271	0245	0220	0194	0169	0144	0119	0095	0070	0046	0021
8	0270	0245	0219	0194	0169	0144	0119	0094	0070	0045	0021
9	0270	0244	0219	0194	0169	0143	0119	0094	0069	0045	0021
10	0270	0244	0218	0193	0168	0143	0118	0093	0069	0044	0020
11	0269	0244	0218	0193	0168	0143	0118	0093	0068	0044	0020
12	0269	0243	0218	0192	0167	0142	0117	0093	0068	0044	0019
13	0268	0243	0217	0192	0167	0142	0117	0092	0068	0043	0019
14	0268	0242	0217	0192	0166	0141	0117	0092	0067	0043	0018
15	0267	0242	0216	0191	0166	0141	0116	0091	0067	0042	0018
16	0267	0241	0216	0191	0166	0141	0116	0091	0066	0042	0018
17	0267	0241	0216	0190	0165	0140	0115	0091	0066	0042	0017
18	0266	0241	0215	0190	0165	0140	0115	0090	0066	0041	0017
19	0266	0240	0215	0189	0164	0139	0114	0090	0065	0041	0016
20	0265	0240	0214	0189	0164	0139	0114	0089	0065	0040	0016
21	0265	0239	0214	0189	0163	0139	0114	0089	0064	0040	0016
22	0264	0239	0213	0188	0163	0138	0113	0089	0064	0040	0015
23	0264	0238	0213	0188	0163	0138	0113	0088	0064	0039	0015
24	0264	0238	0213	0187	0162	0137	0112	0088	0063	0039	0015
25	0263	0238	0212	0187	0162	0137	0112	0087	0063	0038	0014
26	0263	0237	0212	0186	0161	0136	0112	0087	0062	0038	0014
27	0262	0237	0211	0186	0161	0136	0111	0087	0062	0038	0013
28	0262	0236	0211	0186	0161	0136	0111	0086	0062	0037	0013
29	0261	0236	0210	0185	0160	0135	0110	0086	0061	0037	0012
30	0261	0235	0210	0185	0160	0135	0110	0085	0061	0036	0012
31	0261	0235	0210	0184	0159	0134	0110	0085	0060	0036	0012
32	0260	0235	0209	0184	0159	0134	0109	0084	0060	0035	0011
33	0260	0234	0209	0184	0158	0134	0109	0084	0060	0035	0011
34	0259	0234	0208	0183	0158	0133	0108	0084	0059	0035	0010
35	0259	0233	0208	0183	0158	0133	0108	0083	0059	0034	0010
36	0258	0233	0208	0182	0157	0132	0107	0083	0058	0034	0010
37	0258	0232	0207	0182	0157	0132	0107	0082	0058	0033	0009
38	0258	0232	0207	0181	0156	0131	0107	0082	0057	0033	0009
39	0257	0232	0206	0181	0156	0131	0106	0082	0057	0033	0008
40	0257	0231	0206	0181	0156	0131	0106	0081	0057	0032	0008
41	0256	0231	0205	0180	0155	0130	0105	0081	0056	0032	0008
42	0256	0230	0205	0180	0155	0130	0105	0080	0056	0031	0007
43	0255	0230	0205	0179	0154	0129	0105	0080	0055	0031	0007
44	0255	0230	0204	0179	0154	0129	0104	0080	0055	0031	0006
45	0255	0229	0204	0179	0153	0129	0104	0079	0055	0030	0006
46	0254	0229	0203	0178	0153	0128	0103	0079	0054	0030	0006
47	0254	0228	0203	0178	0153	0128	0103	0078	0054	0029	0005
48	0253	0228	0202	0177	0152	0127	0103	0078	0053	0029	0005
49	0253	0227	0202	0177	0152	0127	0102	0077	0053	0029	0004
50	0252	0227	0202	0176	0151	0126	0102	0077	0053	0028	0004
51	0252	0227	0201	0176	0151	0126	0101	0077	0052	0028	0004
52	0252	0226	0201	0176	0151	0126	0101	0076	0052	0027	0003
53	0251	0226	0200	0175	0150	0125	0100	0076	0051	0027	0003
54	0251	0225	0200	0175	0150	0125	0100	0075	0051	0027	0002
55	0250	0225	0200	0174	0149	0124	0100	0075	0051	0026	0002
56	0250	0224	0199	0174	0149	0124	0099	0075	0050	0026	0002
57	0250	0224	0199	0174	0148	0124	0099	0074	0050	0025	0001
58	0249	0224	0198	0173	0148	0123	0098	0074	0049	0025	0001
59	0249	0223	0198	0173	0148	0123	0098	0073	0049	0025	0000

TABLE VIII.

MERIDIONAL PARTS.

Latitudes.															
M.	0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°
0	0	60	120	180	240	300	361	421	482	542	603	664	725	787	848
1	1	61	121	181	241	301	362	422	483	543	604	665	726	788	850
2	2	62	122	182	242	302	363	423	484	544	605	666	727	789	851
3	3	63	123	183	243	303	364	424	485	545	606	667	728	790	852
4	4	64	124	184	244	304	365	425	486	546	607	668	729	791	853
5	5	65	125	185	245	305	366	426	487	547	608	669	730	792	854
6	6	66	126	186	246	306	367	427	488	548	609	670	731	793	855
7	7	67	127	187	247	307	368	428	489	549	610	671	732	794	856
8	8	68	128	188	248	308	369	429	490	550	611	672	734	795	857
9	**9**	**69**	**129**	**189**	**249**	**309**	**370**	**430**	**491**	**551**	**612**	**673**	**735**	**796**	**858**
10	10	70	130	190	250	310	371	431	492	552	613	674	736	797	859
11	11	71	131	191	251	311	372	432	493	553	614	675	737	798	860
12	12	72	132	192	252	312	373	433	494	554	615	676	738	799	861
13	13	73	133	193	253	313	374	434	495	555	616	677	739	800	862
14	14	74	134	194	254	314	375	435	496	556	617	678	740	801	863
15	15	75	135	195	255	315	376	436	497	557	618	679	741	802	864
16	16	76	136	196	256	316	377	437	498	558	619	680	742	803	865
17	17	77	137	197	257	317	378	438	499	559	620	681	743	804	866
18	18	78	138	198	258	318	379	439	500	560	621	682	744	805	867
19	**19**	**79**	**139**	**199**	**259**	**319**	**380**	**440**	**501**	**561**	**622**	**683**	**745**	**806**	**868**
20	20	80	140	200	260	320	381	441	502	562	623	684	746	807	869
21	21	81	141	201	261	321	382	442	503	564	624	686	747	808	870
22	22	82	142	202	262	322	383	443	504	565	625	687	748	809	871
23	23	83	143	203	263	323	384	444	505	566	626	688	749	810	872
24	24	84	144	204	264	324	385	445	506	567	627	689	750	811	873
25	25	85	145	205	265	325	386	446	507	568	628	690	751	812	874
26	26	86	146	206	266	326	387	447	508	569	629	691	752	813	875
27	27	87	147	207	267	327	388	448	509	570	631	692	753	815	876
28	28	88	148	208	268	328	389	449	510	571	632	693	754	816	877
29	**29**	**89**	**149**	**209**	**269**	**329**	**390**	**450**	**511**	**572**	**633**	**694**	**755**	**817**	**878**
30	30	90	150	210	270	331	391	451	512	573	634	695	756	818	879
31	31	91	151	211	271	332	392	452	513	574	635	696	757	819	880
32	32	92	152	212	272	333	393	453	514	575	636	697	758	820	882
33	33	93	153	213	273	334	394	454	515	576	637	698	759	821	883
34	34	94	154	214	274	335	395	455	516	577	638	699	760	822	884
35	35	95	155	215	275	336	396	456	517	578	639	700	761	823	885
36	36	96	156	216	276	337	397	457	518	579	640	701	762	824	886
37	37	97	157	217	277	338	398	458	519	580	641	702	763	825	887
38	38	98	158	218	278	339	399	459	520	581	642	703	764	826	888
39	**39**	**99**	**159**	**219**	**279**	**340**	**400**	**460**	**521**	**582**	**643**	**704**	**765**	**827**	**889**
40	40	100	160	220	280	341	401	461	522	583	644	705	766	828	890
41	41	101	161	221	281	342	402	462	523	584	645	706	767	829	891
42	42	102	162	222	282	343	403	463	524	585	646	707	768	830	892
43	43	103	163	223	283	344	404	464	525	586	647	708	769	831	893
44	44	104	164	224	284	345	405	465	526	587	648	709	770	832	894
45	45	105	165	225	285	346	406	466	527	588	649	710	771	833	895
46	46	106	166	226	286	347	407	467	528	589	650	711	772	834	896
47	47	107	167	227	287	348	408	468	529	590	651	712	773	835	897
48	48	108	168	228	288	349	409	469	530	591	652	713	774	836	898
49	**49**	**109**	**169**	**229**	**289**	**350**	**410**	**470**	**531**	**592**	**653**	**714**	**775**	**837**	**899**
50	50	110	170	230	290	351	411	471	532	593	654	715	777	838	900
51	51	111	171	231	291	352	412	472	533	594	655	716	778	839	901
52	52	112	172	232	292	353	413	473	534	595	656	717	779	840	902
53	53	113	173	233	293	354	414	474	535	596	657	718	780	841	903
54	54	114	174	234	294	355	415	476	536	597	658	719	781	842	904
55	55	115	175	235	295	356	416	477	537	598	659	720	782	843	905
56	56	116	176	236	296	357	417	478	538	599	660	721	783	844	906
57	57	117	177	237	297	358	418	479	539	600	661	722	784	845	907
58	58	118	178	238	298	359	419	480	540	601	662	723	785	846	908
59	*59*	*119*	*179*	*239*	*299*	360	420	481	541	602	663	724	786	847	909

	Latitudes.														
M.	15°	16°	17°	18°	19°	20°	21°	22°	23°	24°	25°	26°	27°	28°	29°
0	910	973	1035	1098	1161	1225	1289	1354	1419	1484	1550	1616	1684	1751	1819
1	912	974	1036	1099	1163	1226	1290	1355	1420	1485	1551	1618	1685	1752	1821
2	913	975	1037	1100	1164	1227	1291	1356	1421	1486	1552	1619	1686	1753	1822
3	914	976	1038	1101	1165	1228	1292	1357	1422	1487	1553	1620	1687	1755	1823
4	915	977	1039	1102	1166	1229	1293	1358	1423	1488	1554	1621	1688	1756	1824
5	916	978	1041	1103	1167	1230	1295	1359	1424	1490	1556	1622	1689	1757	1825
6	917	979	1042	1105	1168	1232	1296	1360	1425	1491	1557	1623	1690	1758	1826
7	918	980	1043	1106	1169	1233	1297	1361	1426	1492	1558	1624	1691	1759	1827
8	919	981	1044	1107	1170	1234	1298	1362	1427	1493	1559	1625	1693	1760	1829
9	920	982	1045	1108	1171	1235	1299	1363	1428	1494	1560	1626	1694	1761	1830
10	921	983	1046	1109	1172	1236	1300	1364	1430	1495	1561	1628	1695	1762	1831
11	922	984	1047	1110	1173	1237	1301	1366	1431	1496	1562	1629	1696	1764	1832
12	923	985	1048	1111	1174	1238	1302	1367	1432	1497	1563	1630	1697	1765	1833
13	924	986	1049	1112	1175	1239	1303	1368	1433	1498	1564	1631	1698	1766	1834
14	925	987	1050	1113	1176	1240	1304	1369	1434	1499	1565	1632	1699	1767	1835
15	926	988	1051	1114	1177	1241	1305	1370	1435	1500	1567	1633	1700	1768	1837
16	927	989	1052	1115	1178	1242	1306	1371	1436	1502	1568	1634	1701	1769	1838
17	928	990	1053	1116	1179	1243	1307	1372	1437	1503	1569	1635	1703	1770	1839
18	929	991	1054	1117	1181	1244	1309	1373	1438	1504	1570	1637	1704	1772	1840
19	930	993	1055	1118	1182	1245	1310	1374	1439	1505	1571	1638	1705	1773	1841
20	931	994	1056	1119	1183	1246	1311	1375	1440	1506	1572	1639	1706	1774	1842
21	932	995	1057	1120	1184	1248	1312	1376	1441	1507	1573	1640	1707	1775	1843
22	933	996	1058	1121	1185	1249	1313	1377	1443	1508	1574	1641	1708	1776	1845
23	934	997	1059	1122	1186	1250	1314	1379	1444	1509	1575	1642	1709	1777	1846
24	935	998	1060	1123	1187	1251	1315	1380	1445	1510	1577	1643	1711	1778	1847
25	936	999	1061	1125	1188	1252	1316	1381	1446	1511	1578	1644	1712	1780	1848
26	937	1000	1063	1126	1189	1253	1317	1382	1447	1513	1579	1645	1713	1781	1849
27	938	1001	1064	1127	1190	1254	1318	1383	1448	1514	1580	1647	1714	1782	1850
28	939	1002	1065	1128	1191	1255	1319	1384	1449	1515	1581	1648	1715	1783	1852
29	941	1003	1066	1129	1192	1256	1320	1385	1450	1516	1582	1649	1716	1784	1853
30	942	1004	1067	1130	1193	1257	1321	1386	1451	1517	1583	1650	1717	1785	1854
31	943	1005	1068	1131	1194	1258	1322	1387	1452	1518	1584	1651	1718	1786	1855
32	944	1006	1069	1132	1195	1259	1324	1388	1453	1519	1585	1652	1720	1787	1856
33	945	1007	1070	1133	1196	1260	1325	1389	1455	1520	1586	1653	1721	1789	1857
34	946	1008	1071	1134	1198	1261	1326	1390	1456	1521	1588	1654	1722	1790	1858
35	947	1009	1072	1135	1199	1262	1327	1392	1457	1522	1589	1656	1723	1791	1860
36	948	1010	1073	1136	1200	1264	1328	1393	1458	1524	1590	1657	1724	1792	1861
37	949	1011	1074	1137	1201	1265	1329	1394	1459	1525	1591	1658	1725	1793	1862
38	950	1012	1075	1138	1202	1266	1330	1395	1460	1526	1592	1659	1726	1794	1863
39	951	1013	1076	1139	1203	1267	1331	1396	1461	1527	1593	1660	1727	1795	1864
40	952	1014	1077	1140	1204	1268	1332	1397	1462	1528	1594	1661	1729	1797	1865
41	953	1015	1078	1141	1205	1269	1333	1398	1463	1529	1595	1662	1730	1798	1866
42	954	1016	1079	1142	1206	1270	1334	1399	1464	1530	1596	1663	1731	1799	1868
43	955	1018	1080	1144	1207	1271	1335	1400	1465	1531	1598	1664	1732	1800	1869
44	956	1019	1081	1145	1208	1272	1336	1401	1467	1532	1599	1666	1733	1801	1870
45	957	1020	1082	1146	1209	1273	1338	1402	1468	1533	1600	1667	1734	1802	1871
46	958	1021	1084	1147	1210	1274	1339	1403	1469	1535	1601	1668	1735	1803	1872
47	959	1022	1085	1148	1211	1275	1340	1405	1470	1536	1602	1669	1736	1805	1873
48	960	1023	1086	1149	1212	1276	1341	1406	1471	1537	1603	1670	1738	1806	1875
49	961	1024	1087	1150	1213	1277	1342	1407	1472	1538	1604	1671	1739	1807	1876
50	962	1025	1088	1151	1215	1278	1343	1408	1473	1539	1605	1672	1740	1808	1877
51	963	1026	1089	1152	1216	1280	1344	1409	1474	1540	1606	1673	1741	1809	1878
52	964	1027	1090	1153	1217	1281	1345	1410	1475	1541	1608	1675	1742	1810	1879
53	965	1028	1091	1154	1218	1282	1346	1411	1476	1542	1609	1676	1743	1811	1880
54	966	1029	1092	1155	1219	1283	1347	1412	1477	1543	1610	1677	1744	1813	1881
55	968	1030	1093	1156	1220	1284	1348	1413	1479	1544	1611	1678	1746	1814	1883
56	969	1031	1094	1157	1221	1285	1349	1414	1480	1546	1612	1679	1747	1815	1884
57	970	1032	1095	1158	1222	1286	1350	1415	1481	1547	1613	1680	1748	1816	1885
58	971	1033	1096	1159	1223	1287	1352	1416	1482	1548	1614	1681	1749	1817	1886
59	972	1034	1097	1160	1224	1288	1353	1418	1483	1549	1615	1682	1750	1818	1887

	Latitudes.													
M.	30°	31°	32°	33°	34°	35°	36°	37°	38°	39°	40°	41°	42°	43°
0	1888	1958	2028	2100	2171	2244	2318	2393	2468	2545	2623	2702	2782	2863
1	1890	1959	2030	2101	2173	2246	2319	2394	2470	2546	2624	2703	2783	2864
2	1891	1960	2031	2102	2174	2247	2320	2395	2471	2548	2625	2704	2784	2866
3	1892	1962	2032	2103	2175	2248	2322	2396	2472	2549	2627	2706	2786	2867
4	1893	1963	2033	2104	2176	2249	2323	2398	2473	2550	2628	2707	2787	2869
5	1894	1964	2034	2105	2178	2250	2324	2399	2475	2551	2629	2708	2788	2870
6	1895	1965	2035	2107	2179	2252	2325	2400	2476	2553	2631	2710	2790	2871
7	1896	1966	2037	2108	2180	2253	2327	2401	2477	2554	2632	2711	2791	2873
8	1898	1967	2038	2109	2181	2254	2328	2403	2478	2555	2633	2712	2792	2874
9	1899	1969	2039	2110	2182	2255	2329	2404	2480	2557	2634	2714	2794	2875
10	1900	1970	2040	2111	2184	2257	2330	2405	2481	2558	2636	2715	2795	2877
11	1901	1971	2041	2113	2185	2258	2332	2406	2482	2559	2637	2716	2797	2878
12	1902	1972	2043	2114	2186	2259	2333	2408	2484	2560	2638	2718	2798	2880
13	1903	1973	2044	2115	2187	2260	2334	2409	2485	2562	2640	2719	2799	2881
14	1905	1974	2045	2116	2188	2261	2335	2410	2486	2563	2641	2720	2801	2882
15	1906	1976	2046	2117	2190	2263	2337	2411	2487	2564	2642	2722	2802	2884
16	1907	1977	2047	2119	2191	2264	2338	2413	2489	2566	2644	2723	2803	2885
17	1908	1978	2048	2120	2192	2265	2339	2414	2490	2567	2645	2724	2805	2886
18	1909	1979	2050	2121	2193	2266	2340	2415	2491	2568	2646	2726	2806	2888
19	1910	1980	2051	2122	2194	2268	2342	2416	2492	2569	2648	2727	2807	2889
20	1912	1981	2052	2123	2196	2269	2343	2418	2494	2571	2649	2728	2809	2891
21	1913	1983	2053	2125	2197	2270	2344	2419	2495	2572	2650	2729	2810	2892
22	1914	1984	2054	2126	2198	2271	2345	2420	2496	2573	2651	2731	2811	2893
23	1915	1985	2056	2127	2199	2272	2346	2422	2498	2575	2653	2732	2813	2895
24	1916	1986	2057	2128	2200	2274	2348	2423	2499	2576	2654	2733	2814	2896
25	1917	1987	2058	2129	2202	2275	2349	2424	2500	2577	2655	2735	2815	2897
26	1918	1988	2059	2131	2203	2276	2350	2425	2501	2578	2657	2736	2817	2899
27	1920	1990	2060	2132	2204	2277	2351	2427	2503	2580	2658	2737	2818	2900
28	1921	1991	2061	2133	2205	2279	2353	2428	2504	2581	2659	2739	2820	2902
29	1922	1992	2063	2134	2207	2280	2354	2429	2505	2582	2661	2740	2821	2903
30	1923	1993	2064	2135	2208	2281	2355	2430	2506	2584	2662	2742	2822	2904
31	1924	1994	2065	2137	2209	2282	2356	2432	2508	2585	2663	2743	2824	2906
32	1925	1995	2066	2138	2210	2283	2358	2433	2509	2586	2665	2744	2825	2907
33	1927	1997	2067	2139	2211	2285	2359	2434	2510	2588	2666	2746	2826	2908
34	1928	1998	2069	2140	2213	2286	2360	2435	2512	2589	2667	2747	2828	2910
35	1929	1999	2070	2141	2214	2287	2361	2437	2513	2590	2669	2748	2829	2911
36	1930	2000	2071	2143	2215	2288	2363	2438	2514	2591	2670	2750	2830	2913
37	1931	2001	2072	2144	2216	2290	2364	2439	2515	2593	2671	2751	2832	2914
38	1932	2002	2073	2145	2217	2291	2365	2440	2517	2594	2673	2752	2833	2915
39	1934	2004	2075	2146	2219	2292	2366	2442	2518	2595	2674	2754	2834	2917
40	1935	2005	2076	2147	2220	2293	2368	2443	2519	2597	2675	2755	2836	2918
41	1936	2006	2077	2149	2221	2295	2369	2444	2521	2598	2676	2756	2837	2919
42	1937	2007	2078	2150	2222	2296	2370	2445	2522	2599	2678	2758	2839	2921
43	1938	2008	2079	2151	2224	2297	2371	2447	2523	2601	2679	2759	2840	2922
44	1939	2010	2080	2152	2225	2298	2373	2448	2524	2602	2680	2760	2841	2924
45	1941	2011	2082	2153	2226	2299	2374	2449	2526	2603	2682	2762	2843	2925
46	1942	2012	2083	2155	2227	2301	2375	2451	2527	2604	2683	2763	2844	2926
47	1943	2013	2084	2156	2228	2302	2376	2452	2528	2606	2684	2764	2845	2928
48	1944	2014	2085	2157	2230	2303	2378	2453	2530	2607	2686	2766	2847	2929
49	1945	2015	2086	2158	2231	2304	2379	2454	2531	2608	2687	2767	2848	2931
50	1946	2017	2088	2159	2232	2306	2380	2456	2532	2610	2688	2768	2849	2932
51	1948	2018	2089	2161	2233	2307	2381	2457	2533	2611	2690	2770	2851	2933
52	1949	2019	2090	2162	2235	2308	2383	2458	2535	2612	2691	2771	2852	2935
53	1950	2020	2091	2163	2236	2309	2384	2459	2536	2614	2692	2772	2854	2936
54	1951	2021	2092	2164	2237	2311	2385	2461	2537	2615	2694	2774	2855	2937
55	1952	2022	2094	2165	2238	2312	2386	2462	2538	2616	2695	2775	2856	2939
56	1953	2024	2095	2167	2239	2313	2388	2463	2540	2617	2696	2776	2858	2940
57	1955	2025	2096	2168	2241	2314	2389	2464	2541	2619	2698	2778	2859	2942
58	1956	2026	2097	2169	2242	2316	2390	2466	2542	2620	2699	2779	2860	2943
59	1957	2027	2098	2170	2243	2317	2391	2467	2544	2621	2700	2780	2862	2944

	Latitudes.													
M.	44°	45°	46°	47°	48°	49°	50°	51°	52°	53°	54°	55°	56°	57°
0	2946	3030	3116	3203	3292	3382	3474	3569	3665	3764	3865	3968	4074	4183
1	2947	3031	3117	3204	3293	3384	3476	3570	3667	3765	3866	3970	4076	4184
2	2949	3033	3118	3206	3295	3385	3478	3572	3668	3767	3868	3971	4077	4186
3	2950	3034	3120	3207	3296	3387	3479	3574	3670	3769	3870	3973	4079	4188
4	2951	3036	3121	3209	3298	3388	3481	3575	3672	3770	3871	3975	4081	4190
5	2953	3037	3123	3210	3299	3390	3482	3577	3673	3772	3873	3977	4083	4192
6	2954	3038	3124	3212	3301	3391	3484	3578	3675	3774	3875	3978	4085	4194
7	2956	3040	3126	3213	3302	3393	3485	3580	3677	3775	3877	3980	4086	4195
8	2957	3041	3127	3214	3303	3394	3487	3582	3678	3777	3878	3982	4088	4197
9	2958	3043	3129	3216	3305	3396	3488	3583	3680	3779	3880	3984	4090	4199
10	2960	3044	3130	3217	3306	3397	3490	3585	3681	3780	3882	3985	4092	4201
11	2961	3046	3131	3219	3308	3399	3492	3586	3683	3782	3883	3987	4094	4203
12	2963	3047	3133	3220	3309	3400	3493	3588	3685	3784	3885	3989	4095	4205
13	2964	3048	3134	3222	3311	3402	3495	3590	3686	3785	3887	3991	4097	4207
14	2965	3050	3136	3223	3312	3403	3496	3591	3688	3787	3889	3992	4099	4208
15	2967	3051	3137	3225	3314	3405	3498	3593	3690	3789	3890	3994	4101	4210
16	2968	3053	3139	3226	3316	3407	3499	3594	3691	3790	3892	3996	4103	4212
17	2970	3054	3140	3228	3317	3408	3501	3596	3693	3792	3894	3998	4104	4214
18	2971	3055	3142	3229	3319	3410	3503	3598	3695	3794	3895	3999	4106	4216
19	2972	3057	3143	3231	3320	3411	3504	3599	3696	3795	3897	4001	4108	4218
20	2974	3058	3144	3232	3322	3413	3506	3601	3698	3797	3899	4003	4110	4220
21	2975	3060	3146	3234	3323	3414	3507	3602	3699	3799	3901	4005	4112	4221
22	2976	3061	3147	3235	3325	3416	3509	3604	3701	3800	3902	4006	4113	4223
23	2978	3063	3149	3237	3326	3417	3510	3606	3703	3802	3904	4008	4115	4225
24	2979	3064	3150	3238	3328	3419	3512	3607	3704	3804	3906	4010	4117	4227
25	2981	3065	3152	3240	3329	3420	3514	3609	3706	3806	3907	4012	4119	4229
26	2982	3067	3153	3241	3331	3422	3515	3610	3708	3807	3909	4014	4121	4231
27	2983	3068	3155	3242	3332	3423	3517	3612	3709	3809	3911	4015	4122	4232
28	2985	3070	3156	3244	3334	3425	3518	3614	3711	3811	3913	4017	4124	4234
29	2986	3071	3157	3245	3335	3427	3520	3615	3713	3812	3914	4019	4126	4236
30	2988	3073	3159	3247	3337	3428	3521	3617	3714	3814	3916	4021	4128	4238
31	2989	3074	3160	3248	3338	3430	3523	3618	3716	3816	3918	4022	4130	4240
32	2991	3075	3162	3250	3340	3431	3525	3620	3717	3817	3919	4024	4132	4242
33	2992	3077	3163	3251	3341	3433	3526	3622	3719	3819	3921	4026	4133	4244
34	2993	3078	3165	3253	3343	3434	3528	3623	3721	3821	3923	4028	4135	4246
35	2995	3080	3166	3254	3344	3436	3529	3625	3722	3822	3925	4029	4137	4247
36	2996	3081	3168	3256	3346	3437	3531	3626	3724	3824	3926	4031	4139	4249
37	2998	3083	3169	3257	3347	3439	3532	3628	3726	3826	3928	4033	4141	4251
38	2999	3084	3171	3259	3349	3440	3534	3630	3727	3827	3930	4035	4142	4253
39	3000	3085	3172	3260	3350	3442	3536	3631	3729	3829	3932	4037	4144	4255
40	3002	3087	3173	3262	3352	3443	3537	3633	3731	3831	3933	4038	4146	4257
41	3003	3088	3175	3263	3353	3445	3539	3634	3732	3832	3935	4040	4148	4259
42	3005	3090	3176	3265	3355	3447	3540	3636	3734	3834	3937	4042	4150	4260
43	3006	3091	3178	3266	3356	3448	3542	3638	3736	3836	3938	4044	4152	4262
44	3007	3093	3179	3268	3358	3450	3543	3639	3737	3838	3940	4045	4153	4264
45	3009	3094	3181	3269	3359	3451	3545	3641	3739	3839	3942	4047	4155	4266
46	3010	3095	3182	3271	3361	3453	3547	3643	3741	3841	3944	4049	4157	4268
47	3012	3097	3184	3272	3362	3454	3548	3644	3742	3843	3945	4051	4159	4270
48	3013	3098	3185	3274	3364	3456	3550	3646	3744	3844	3947	4052	4161	4272
49	3014	3100	3187	3275	3365	3457	3551	3647	3746	3846	3949	4054	4162	4274
50	3016	3101	3188	3277	3367	3459	3553	3649	3747	3848	3951	4056	4164	4275
51	3017	3103	3190	3278	3368	3460	3555	3651	3749	3849	3952	4058	4166	4277
52	3019	3104	3191	3280	3370	3462	3556	3652	3750	3851	3954	4060	4168	4279
53	3020	3105	3192	3281	3371	3464	3558	3654	3752	3853	3956	4061	4170	4281
54	3021	3107	3194	3283	3373	3465	3559	3655	3754	3854	3958	4063	4172	4283
55	3023	3108	3195	3284	3374	3467	3561	3657	3755	3856	3959	4065	4173	4285
56	3024	3110	3197	3286	3376	3468	3562	3659	3757	3858	3961	4067	4175	4287
57	*3026*	*3111*	3198	3287	3378	3470	3564	3660	3759	3860	3963	4069	4177	4289
58	*3027*	*3113*	3200	3289	3379	3471	3566	3662	3760	3861	3964	4070	4179	4291
59	*3029*	3114	3201	3290	3381	3473	3567	3664	3762	3863	3966	4072	4181	4292

	Latitudes.													
M.	58°	59°	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°	71°
0	4294	4409	4527	4649	4775	4905	5039	5179	5324	5474	5631	5795	5966	6146
1	4296	4411	4529	4651	4777	4907	5042	5181	5326	5477	5633	5797	5969	6149
2	4298	4413	4531	4653	4779	4909	5044	5184	5328	5479	5636	5800	5972	6152
3	4300	4415	4533	4655	4781	4912	5046	5186	5331	5482	5639	5803	5975	6155
4	4302	4417	4535	4657	4784	4914	5049	5188	5333	5484	5642	5806	5978	6158
5	4304	4419	4537	4660	4786	4916	5051	5191	5336	5487	5644	5809	5981	6161
6	4306	4421	4539	4662	4788	4918	5053	5193	5338	5489	5647	5811	5984	6164
7	4308	4423	4541	4664	4790	4920	5055	5195	5341	5492	5650	5814	5986	6167
8	4309	4425	4543	4666	4792	4923	5058	5198	5343	5495	5652	5817	5989	6170
9	4311	4427	4545	4668	4794	4925	5060	5200	5346	5497	5655	5820	5992	6173
10	4313	4429	4547	4670	4796	4927	5062	5203	5348	5500	5658	5823	5995	6177
11	4315	4431	4549	4672	4798	4929	5065	5205	5351	5502	5660	5825	5998	6180
12	4317	4433	4551	4674	4801	4931	5067	5207	5353	5505	5663	5828	6001	6183
13	4319	4434	4553	4676	4803	4934	5069	5210	5356	5507	5666	5831	6004	6186
14	4321	4436	4555	4678	4805	4936	5071	5212	5358	5510	5668	5834	6007	6189
15	4323	4438	4557	4680	4807	4938	5074	5214	5361	5513	5671	5837	6010	6192
16	4325	4440	4559	4682	4809	4940	5076	5217	5363	5515	5674	5839	6013	6195
17	4327	4442	4562	4684	4811	4943	5078	5219	5366	5518	5676	5842	6016	6198
18	4328	4444	4564	4687	4814	4945	5081	5222	5368	5520	5679	5845	6019	6201
19	4330	4446	4566	4689	4816	4947	5083	5224	5371	5523	5682	5848	6022	6205
20	4332	4448	4568	4691	4818	4949	5085	5226	5373	5526	5685	5851	6025	6208
21	4334	4450	4570	4693	4820	4951	5088	5229	5376	5528	5687	5854	6028	6211
22	4336	4452	4572	4695	4822	4954	5090	5231	5378	5531	5690	5856	6031	6214
23	4338	4454	4574	4627	4824	4956	5092	5234	5380	5533	5693	5859	6034	6217
24	4340	4456	4576	4699	4826	4958	5095	5236	5383	5536	5695	5862	6037	6220
25	4342	4458	4578	4701	4829	4960	5097	5238	5385	5539	5698	5865	6040	6223
26	4344	4460	4580	4703	4831	4963	5099	5241	5388	5541	5701	5868	6043	6226
27	4346	4462	4582	4705	4833	4965	5102	5243	5390	5544	5704	5871	6046	6230
28	4347	4464	4584	4707	4835	4967	5104	5246	5393	5546	5706	5874	6049	6233
29	4349	4466	4586	4710	4837	4969	5106	5248	5395	5549	5709	5876	6052	6236
30	4351	4468	4588	4712	4839	4972	5108	5250	5398	5552	5712	5879	6055	6239
31	4353	4470	4590	4714	4842	4974	5111	5253	5401	5554	5715	5882	6058	6242
32	4355	4472	4592	4716	4844	4976	5113	5255	5403	5557	5717	5885	6061	6245
33	4357	4474	4594	4718	4846	4978	5115	5258	5406	5559	5720	5888	6064	6249
34	4359	4476	4596	4720	4848	4981	5118	5260	5408	5562	5723	5891	6067	6252
35	4361	4478	4598	4722	4850	4983	5120	5263	5411	5565	5725	5894	6070	6255
36	4363	4480	4600	4724	4852	4985	5122	5265	5413	5567	5728	5896	6073	6258
37	4365	4482	4602	4726	4855	4987	5125	5267	5416	5570	5731	5899	6076	6261
38	4367	4484	4604	4728	4857	4990	5127	5270	5418	5573	5734	5902	6079	6264
39	4369	4486	4606	4731	4859	4992	5129	5272	5421	5575	5736	5905	6082	6268
40	4370	4488	4608	4733	4861	4994	5132	5275	5423	5578	5739	5908	6085	6271
41	4372	4490	4610	4735	4863	4996	5134	5277	5426	5580	5742	5911	6088	6274
42	4374	4492	4612	4737	4865	4999	5136	5280	5428	5583	5745	5914	6091	6277
43	4376	4494	4614	4739	4868	5001	5139	5282	5431	5586	5747	5917	6094	6280
44	4378	4495	4616	4741	4870	5003	5141	5284	5433	5588	5750	5919	6097	6283
45	4380	4497	4618	4743	4872	5005	5143	5287	5436	5591	5753	5922	6100	6287
46	4382	4499	4620	4745	4874	5008	5146	5289	5438	5594	5756	5925	6103	6290
47	4384	4501	4623	4747	4876	5010	5148	5292	5441	5596	5758	5928	6106	6293
48	4386	4503	4625	4750	4879	5012	5151	5294	5443	5599	5761	5931	6109	6296
49	4388	4505	4627	4752	4881	5014	5153	5297	5446	5602	5764	5934	6112	6299
50	4390	4507	4629	4754	4883	5017	5155	5299	5448	5604	5767	5937	6115	6303
51	4392	4509	4631	4756	4885	5019	5158	5301	5451	5607	5770	5940	6118	6306
52	4394	4511	4633	4758	4887	5021	5160	5304	5454	5610	5772	5943	6121	6309
53	4396	4513	4635	4760	4890	5023	5162	5306	5456	5612	5775	5946	6124	6312
54	4398	4515	4637	4762	4892	5026	5165	5309	5459	5615	5778	5948	6127	6315
55	4399	4517	4639	4764	4894	5028	5167	5311	5461	5617	5781	5951	6130	6319
56	4401	4519	4641	4766	4896	5030	5169	5314	5464	5620	5783	5954	6133	6322
57	4403	4521	4643	4769	4898	5033	5172	5316	5466	5623	5786	5957	6136	6325
58	4405	4523	4645	4771	4901	5035	5174	5319	5469	5625	5789	5960	6140	6329
59	4407	4525	4647	4773	4903	5037	5176	5321	5471	5628	5792	5963	6143	6332

	Latitudes.													
M.	72°	73°	74°	75°	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°
0	6335	6534	6746	6970	7210	7467	7745	8046	8375	8739	9145	9606	10137	10765
1	6338	6538	6749	6974	7214	7472	7749	8051	8381	8745	9153	9614	10146	10776
2	6341	6541	6753	6978	7218	7476	7754	8056	8387	8752	9160	9622	10156	10788
3	6345	6545	6757	6982	7222	7481	7759	8061	8393	8758	9167	9631	10166	10799
4	6348	6548	6760	6986	7227	7485	7764	8067	8398	8765	9174	9639	10175	10811
5	6351	6552	6764	6990	7231	7490	7769	8072	8404	8771	9182	9647	10185	10822
6	6354	6555	6768	6994	7235	7494	7774	8077	8410	8778	9189	9655	10195	10834
7	6358	6558	6771	6997	7239	7498	7778	8083	8416	8784	9196	9664	10205	10846
8	6361	6562	6775	7001	7243	7503	7783	8088	8422	8791	9203	9672	10214	10858
9	6364	6565	6779	7005	7247	7507	7788	8093	8427	8797	9211	9680	10224	10869
10	6367	6569	6782	7009	7252	7512	7793	8099	8433	8804	9218	9689	10234	10881
11	6371	6572	6786	7013	7256	7516	7798	8104	8439	8810	9225	9697	10244	10893
12	6374	6576	6790	7017	7260	7521	7803	8109	8445	8817	9233	9706	10254	10905
13	6377	6579	6793	7021	7264	7525	7808	8115	8451	8823	9240	9714	10264	10917
14	6380	6583	6797	7025	7268	7530	7813	8120	8457	8830	9248	9723	10273	10929
15	6384	6586	6801	7029	7273	7535	7817	8125	8463	8836	9255	9731	10283	10941
16	6387	6590	6804	7033	7277	7539	7823	8131	8469	8843	9262	9740	10293	10953
17	6390	6593	6808	7037	7281	7544	7827	8136	8474	8849	9270	9748	10303	10965
18	6394	6597	6812	7041	7285	7548	7832	8141	8480	8856	9277	9757	10314	10978
19	6397	6600	6815	7045	7289	7553	7837	8147	8486	8863	9285	9765	10324	10990
20	6400	6603	6819	7048	7294	7557	7842	8152	8492	8869	9292	9774	10334	11002
21	6403	6607	6823	7052	7298	7562	7847	8158	8498	8876	9300	9783	10344	11014
22	6407	6610	6826	7056	7302	7566	7852	8163	8504	8883	9307	9791	10354	11027
23	6410	6614	6830	7060	7306	7571	7857	8168	8510	8889	9315	9800	10364	11039
24	6413	6617	6834	7064	7311	7576	7862	8174	8516	8896	9322	9809	10374	11052
25	6417	6621	6838	7068	7315	7580	7867	8179	8522	8903	9330	9817	10385	11064
26	6420	6624	6841	7072	7319	7585	7872	8185	8528	8909	9337	9826	10395	11077
27	6423	6628	6845	7076	7323	7589	7877	8190	8534	8916	9345	9835	10405	11089
28	6427	6631	6849	7080	7328	7594	7882	8196	8540	8923	9353	9844	10416	11102
29	6430	6635	6853	7084	7332	7599	7887	8201	8546	8930	9360	9852	10426	11115
30	6433	6639	6856	7088	7336	7603	7892	8207	8552	8936	9368	9861	10437	11127
31	6437	6642	6860	7092	7341	7608	7897	8212	8558	8943	9376	9870	10447	11140
32	6440	6646	6864	7096	7345	7612	7902	8218	8565	8950	9383	9879	10457	11153
33	6443	6649	6868	7100	7349	7617	7907	8223	8571	8957	9391	9888	10468	11166
34	6447	6653	6871	7104	7353	7622	7912	8229	8577	8963	9399	9897	10479	11179
35	6450	6656	6875	7108	7358	7626	7917	8234	8583	8970	9407	9906	10489	11192
36	6453	6660	6879	7112	7362	7631	7922	8240	8589	8977	9414	9915	10500	11205
37	6457	6663	6883	7116	7366	7636	7927	8245	8595	8984	9422	9924	10510	11218
38	6460	6667	6886	7120	7371	7640	7932	8251	8601	8991	9430	9933	10521	11231
39	6463	6670	6890	7124	7375	7645	7937	8256	8607	8998	9438	9942	10532	11244
40	6467	6674	6894	7128	7379	7650	7942	8262	8614	9005	9445	9951	10542	11257
41	6470	6677	6898	7132	7384	7654	7948	8267	8620	9012	9453	9960	10553	11270
42	6473	6681	6901	7136	7388	7659	7953	8273	8626	9018	9461	9969	10564	11284
43	6477	6685	6905	7140	7392	7664	7958	8279	8632	9025	9469	9978	10575	11297
44	6480	6688	6909	7145	7397	7668	7963	8284	8638	9032	9477	9987	10586	11310
45	6483	6692	6913	7149	7401	7673	7968	8290	8644	9039	9485	9996	10597	11324
46	6487	6695	6917	7153	7406	7678	7973	8295	8651	9046	9493	10005	10608	11337
47	6490	6699	6920	7157	7410	7683	7978	8301	8657	9053	9501	10015	10619	11351
48	6494	6702	6924	7161	7414	7687	7983	8307	8663	9060	9509	10024	10630	11365
49	6497	6706	6928	7165	7419	7692	7989	8312	8669	9067	9517	10033	10641	11378
50	6500	6710	6932	7169	7423	7697	7994	8318	8676	9074	9525	10043	10652	11392
51	6504	6713	6936	7173	7427	7702	7999	8324	8682	9081	9533	10052	10663	11406
52	6507	6717	6940	7177	7432	7706	8004	8329	8688	9088	9541	10061	10674	11420
53	6511	6720	6943	7181	7436	7711	8009	8335	8695	9096	9549	10071	10685	11434
54	6514	6724	6947	7185	7441	7716	8014	8341	8701	9103	9557	10080	10696	11448
55	6517	6728	6951	7189	7445	7721	8020	8347	8707	9110	9565	10089	10708	11462
56	6521	6731	6955	7194	7449	7725	8025	8352	8714	9117	9573	10099	10719	11476
57	6524	6735	6959	7198	7454	7730	8030	8358	8720	9124	9581	10108	10730	11490
58	6528	6738	6963	7202	7458	7735	8035	8364	8726	9131	9589	10118	10742	11504
59	6531	6742	6966	7206	7463	7740	8040	8369	8733	9138	9598	10127	10753	11518

TABLE IX.

HYPERBOLIC LOGARITHMS.

TABLE X.

REDUCTION OF LATITUDE.

No.	Log.	No.	Log.	No.	Log.	No.	Log.	No.	Log.
1	0.000000	61	4.110874	121	4.795790	181	5.198497	241	5.484767
2	0.693147	62	4.127134	122	4.804021	182	5.204007	242	5.488938
3	1.098612	63	4.143135	123	4.812184	183	5.209486	243	5.493061
4	1.386294	64	4.158883	124	4.820282	184	5.214936	244	5.497168
5	1.609348	65	4.174387	125	4.828314	185	5.220356	245	5.501258
6	1.791759	66	4.189655	126	4.836282	186	5.225747	246	5.505332
7	1.945910	67	4.204693	127	4.844187	187	5.231109	247	5.509388
8	2.079441	68	4.219508	128	4.852030	188	5.236442	248	5.513429
9	2.197225	69	4.234106	129	4.859812	189	5.241747	249	5.517453
10	2.302585	70	4.248495	130	4.867534	190	5.247024	250	5.521461
11	2.397895	71	4.262680	131	4.875197	191	5.252273	251	5.525453
12	2.484907	72	4.276666	132	4.882802	192	5.257495	252	5.529429
13	2.564949	73	4.290459	133	4.890349	193	5.262690	253	5.533390
14	2.639057	74	4.304065	134	4.897840	194	5.267858	254	5.537334
15	2.708050	75	4.317488	135	4.905275	195	5.273000	255	5.541264
16	2.772589	76	4.330733	136	4.912655	196	5.278115	256	5.545177
17	2.833213	77	4.343805	137	4.919981	197	5.283204	257	5.549076
18	2.890372	78	4.356709	138	4.927254	198	5.288267	258	5.552960
19	2.944439	79	4.369448	139	4.934474	199	5.293305	259	5.556828
20	2.995732	80	4.382027	140	4.941642	200	5.298317	260	5.560682
21	3.044522	81	4.394450	141	4.948760	201	5.303305	261	5.564520
22	3.091042	82	4.406719	142	4.955827	202	5.308268	262	5.568345
23	3.135494	83	4.418841	143	4.962845	203	5.313206	263	5.572154
24	3.178054	84	4.430817	144	4.969813	204	5.318120	264	5.575950
25	3.218876	85	4.442651	145	4.976734	205	5.323010	265	5.579730
26	3.258096	86	4.454347	146	4.983607	206	5.327876	266	5.583496
27	3.295837	87	4.465908	147	4.990433	207	5.332719	267	5.587249
28	3.332204	88	4.477337	148	4.997212	208	5.337538	268	5.590987
29	3.367296	89	4.488636	149	5.003946	209	5.342334	269	5.594711
30	3.401197	90	4.499810	150	5.010635	210	5.347108	270	5.598422
31	3.433987	91	4.510859	151	5.017280	211	5.351858	271	5.602119
32	3.465736	92	4.521789	152	5.023881	212	5.356586	272	5.605802
33	3.496508	93	4.532599	153	5.030438	213	5.361292	273	5.609472
34	3.526360	94	4.543295	154	5.036953	214	5.365976	274	5.613128
35	3.555348	95	4.553877	155	5.043425	215	5.370638	275	5.616771
36	3.583519	96	4.564348	156	5.049856	216	5.375278	276	5.620401
37	3.610918	97	4.574711	157	5.056246	217	5.379897	277	5.624018
38	3.637586	98	4.584967	158	5.062595	218	5.384495	278	5.627621
39	3.663561	99	4.595120	159	5.068904	219	5.389072	279	5.631212
40	3.688879	100	4.605170	160	5.075173	220	5.393628	280	5.634790
41	3.713572	101	4.615120	161	5.081404	221	5.398163	281	5.638355
42	3.737670	102	4.624973	162	5.087596	222	5.402677	282	5.641907
43	3.761200	103	4.634729	163	5.093750	223	5.407172	283	5.645447
44	3.784190	104	4.644391	164	5.099866	224	5.411646	284	5.648974
45	3.806662	105	4.653960	165	5.105946	225	5.416100	285	5.652489
46	3.828641	106	4.663439	166	5.111988	226	5.420535	286	5.655992
47	3.850148	107	4.672829	167	5.117994	227	5.424950	287	5.659482
48	3.871201	108	4.682131	168	5.123964	228	5.429346	288	5.662961
49	3.891820	109	4.691348	169	5.129899	229	5.433722	289	5.666427
50	3.912023	110	4.700480	170	5.135798	230	5.438080	290	5.669881
51	3.931826	111	4.709530	171	5.141664	231	5.442418	291	5.673323
52	3.951244	112	4.718499	172	5.147495	232	5.446737	292	5.676754
53	3.970292	113	4.727388	173	5.153292	233	5.451039	293	5.680173
54	3.988984	114	4.736198	174	5.159055	234	5.455321	294	5.683580
55	4.007333	115	4.744932	175	5.164786	235	5.459586	295	5.686975
56	4.025352	116	4.753590	176	5.170484	236	5.463832	296	5.690360
57	4.043051	117	4.762174	177	5.176150	237	5.468060	297	5.693732
58	4.060443	118	4.770685	178	5.181784	238	5.472271	298	5.697094
59	4.077537	119	4.779123	179	5.187386	239	5.476464	299	5.700444
60	4.094345	120	4.787492	180	5.192957	240	5.480639	300	5.703783

No.	Log.	No.	Log.	No.	Log.	No.	Log.	No.	Log.
301	5.707110	361	5.888878	421	6.042633	481	6.175867	541	6.293419
302	5.710427	362	5.891644	422	6.045005	482	6.177944	542	6.295266
303	5.713733	363	5.894402	423	6.047372	483	6.180017	543	6.297109
304	5.717028	364	5.897154	424	6.049734	484	6.182085	544	6.298949
305	5.720312	365	5.899897	425	6.052089	485	6.184149	545	6.300786
306	5.723585	366	5.902633	426	6.054440	486	6.186209	546	6.302619
307	5.726848	367	5.905362	427	6.056784	487	6.188264	547	6.304449
308	5.730010	368	5.908083	428	6.059123	488	6.190315	548	6.306275
309	5.733341	369	5.910797	429	6.061457	489	6.192363	549	6.308098
310	5.736572	370	5.913503	430	6.063785	490	6.194405	550	6.309918
311	5.739793	371	5.916202	431	6.066108	491	6.196444	551	6.311735
312	5.743003	372	5.918893	432	6.068426	492	6.198479	552	6.313548
313	5.746203	373	5.921578	433	6.070738	493	6.200509	553	6.315358
314	5.749393	374	5.924256	434	6.073045	494	6.202536	554	6.317165
315	5.752573	375	5.926926	435	6.075346	495	6.204558	555	6.318968
316	5.755742	376	5.929589	436	6.077642	496	6.206576	556	6.320768
317	5.758902	377	5.932245	437	6.079933	497	6.208590	557	6.322565
318	5.762051	378	5.934894	438	6.082219	498	6.210600	558	6.324359
319	5.765191	379	5.937536	439	6.084499	499	6.212606	559	6.326150
320	5.768321	380	5.940171	440	6.086775	500	6.214608	560	6.327937
321	5.771441	381	5.942799	441	6.089045	501	6.216606	561	6.329721
322	5.774552	382	5.945421	442	6.091310	502	6.218600	562	6.331502
323	5.777652	383	5.948035	443	6.093570	503	6.220590	563	6.333280
324	5.780744	384	5.950643	444	6.095825	504	6.222576	564	6.335054
325	5.783825	385	5.953243	445	6.098074	505	6.224558	565	6.336826
326	5.786897	386	5.955837	446	6.100320	506	6.226537	566	6.338594
327	5.789960	387	5.958425	447	6.102559	507	6.228511	567	6.340359
328	5.793014	388	5.961005	448	6.104793	508	6.230481	568	6.342121
329	5.796058	389	5.963579	449	6.107023	509	6.232448	569	6.343880
330	5.799093	390	5.966147	450	6.109248	510	6.234411	570	6.345636
331	5.802118	391	5.968708	451	6.111467	511	6.236370	571	6.347389
332	5.805135	392	5.971262	452	6.113682	512	6.238325	572	6.349139
333	5.808143	393	5.973810	453	6.115892	513	6.240276	573	6.350886
334	5.811141	394	5.976351	454	6.118097	514	6.242223	574	6.352629
335	5.814131	395	5.978886	455	6.120297	515	6.244167	575	6.354370
336	5.817111	396	5.981414	456	6.122493	516	6.246107	576	6.356107
337	5.820083	397	5.983936	457	6.124683	517	6.248043	577	6.357842
338	5.823046	398	5.986452	458	6.126869	518	6.249975	578	6.359574
339	5.826000	399	5.988961	459	6.129050	519	6.251904	579	6.361303
340	5.828946	400	5.991465	460	6.131227	520	6.253829	580	6.363028
341	5.831882	401	5.993961	461	6.133398	521	6.255750	581	6.364751
342	5.834810	402	5.996452	462	6.135565	522	6.257668	582	6.366470
343	5.837730	403	5.998937	463	6.137727	523	6 259582	583	6.368187
344	5.840642	404	6.001415	464	6.139885	524	6.261492	584	6.369901
345	5.843544	405	6.003887	465	6.142037	525	6.263398	585	6.371612
346	5.846439	406	6.006353	466	6.144186	526	6.265301	586	6.373320
347	5.849325	407	6.008813	467	6.146329	527	6.267201	587	6.375025
348	5.852203	408	6.011267	468	6.148468	528	6.269096	588	6.376727
349	5.855072	409	6.013715	469	6.150603	529	6.270988	589	6.378426
350	5.857933	410	6.016157	470	6.152733	530	6 272877	590	6.380123
351	5.860786	411	6.018593	471	6.154858	531	6.274762	591	6.381816
352	5.863631	412	6.021023	472	6.156979	532	6.276644	592	6.383507
353	5.866468	413	6.023448	473	6.159095	533	6.278521	593	6.385194
354	5.869297	414	6.025866	474	6.161207	534	6.280396	594	6.386879
355	5.872118	415	6.028279	475	6.163315	535	6.282267	595	6.388561
356	5.874931	416	6.030685	476	6.165418	536	6.284134	596	6.390241
357	5.877736	417	6.033086	477	6.167517	537	6.285998	597	6.391917
358	5.880533	418	6.035481	478	6.169611	538	6.287859	598	6.393501
359	5.883322	419	6.037871	479	6.171701	539	6.289716	599	6.395262
360	5.886104	420	6.040255	480	6.173786	540	6.291569	600	6.396930

No.	Log.	No.	Log.	No.	Log.	No.	Log.	No.	Log.
601	6.398595	661	6.493754	721	6.580640	781	6.660575	841	6.734592
602	6.400257	662	6.495266	722	6.582025	782	6.661855	842	6.735780
603	6.401917	663	6.496775	723	6.583409	783	6.663133	843	6.736967
604	6.403574	664	6.498282	724	6.584791	784	6.664409	844	6.738153
605	6.405228	665	6.499787	725	6.586172	785	6.665684	845	6.739367
606	6.406880	666	6.501290	726	6.587550	786	6.666957	846	6.740519
607	6.408529	667	6.502790	727	6.588927	787	6.668228	847	6.741701
608	6.410175	668	6.504288	728	6.590301	788	6.669498	848	6.742881
609	6.411818	669	6.505784	729	6.591674	789	6.670766	849	6.744059
610	6.413459	670	6.507278	730	6.593045	790	6.672033	850	6.745236
611	6.415097	671	6.508769	731	6.594414	791	6.673298	851	6.746412
612	6.416732	672	6.510258	732	6.595781	792	6.674561	852	6.747587
613	6.418365	673	6.511745	733	6.597146	793	6.675823	853	6.748760
614	6.419995	674	6.513230	734	6.598509	794	6.677084	854	6.749931
615	6.421622	675	6.514713	735	6.599871	795	6.678342	855	6.751102
616	6.423247	676	6.516193	736	6.601230	796	6.679599	856	6.752270
617	6.424869	677	6.517671	737	6.602588	797	6.680855	857	6.753438
618	6.426489	678	6.519147	738	6.603944	798	6.682109	858	6.754604
619	6.428105	679	6.520621	739	6.605298	799	6.683361	859	6.755769
620	6.429720	680	6.522093	740	6.606650	800	6.684612	860	6.756932
621	6.431331	681	6.523562	741	6.608001	801	6.685681	861	6.758095
622	6.432940	682	6.525030	742	6.609349	802	6.687109	862	6.759255
623	6.434547	683	6.526495	743	6.610696	803	6.688355	863	6.760415
624	6.436150	684	6.527958	744	6.612041	804	6.689599	864	6.761573
625	6.437752	685	6.529419	745	6.613384	805	6.690842	865	6.762730
626	6.439350	686	6.530878	746	6.614726	806	6.692084	866	6.763885
627	6.440947	687	6.532334	747	6.616065	807	6.693324	867	6.765039
628	6.442540	688	6.533789	748	6.617403	808	6.694562	868	6.766192
629	6.444131	689	6.535241	749	6.618739	809	6.695799	869	6.767343
630	6.445720	690	6.536692	750	6.620073	810	6.697034	870	6.768493
631	6.447306	691	6.538140	751	6.621406	811	6.698268	871	6.769642
632	6.448889	692	6.539586	752	6.622736	812	6.699500	872	6.770789
633	6.450470	693	6.541030	753	6.624065	813	6.700188	873	6.771936
634	6.452049	694	6.542472	754	6.625392	814	6.701860	874	6.773080
635	6.453625	695	6.543912	755	6.626718	815	6.703188	875	6.774224
636	6.455199	696	6.545350	756	6.628041	816	6.704414	876	6.775366
637	6.456770	697	6.546785	757	6.629363	817	6.705639	877	6.776507
638	6.458338	698	6.548219	758	6.630683	818	6.706862	878	6.777647
639	6.459905	699	6.549650	759	6 632002	819	6.708084	879	6.778785
640	6.461468	700	6.551080	760	6.633318	820	6.709304	880	6.779922
641	6.463030	701	6.552508	761	6.634633	821	6.710523	831	6.781058
642	6.464588	702	6.553933	762	6.635947	822	6.711740	882	6.782192
643	6.466145	703	6.555357	763	6.637258	823	6.712956	883	6.783325
644	6.467699	704	6.556778	764	6.638568	824	6.714170	884	6.784457
645	6.469250	705	6.558198	765	6.639876	825	6.715383	885	6.785588
646	6.470800	706	6.559615	766	6.641182	826	6.716595	886	6.786717
647	6.472346	707	6.561031	767	6.642487	827	6.717805	887	6.787845
648	6.473891	708	6.562444	768	6.643790	828	6.719013	888	6.788972
649	6.475433	709	6.563856	769	6.645091	829	6.720220	889	6.790097
650	6.476972	710	6.565265	770	6.646391	830	6.721426	890	6.791222
651	6.478510	711	6.566672	771	6.647688	831	6.722630	891	6.792344
652	6.480045	712	6.568078	772	6.648985	832	6.723832	892	6.793466
653	6.481577	713	6.569481	773	6.650279	833	6.725033	893	6.794587
654	6.483107	714	6.570883	774	6.651572	834	6.726233	894	6.795706
655	6.484635	715	6.572283	775	6.652863	835	6.727432	895	6.796824
656	6.486160	716	6.573680	776	6.654153	836	6.728629	896	6.797940
657	6.487684	717	6.575076	777	6.655440	837	6.729824	897	6.799056
658	6.489205	718	6.576470	778	6.656727	838	6.731018	898	6.800170
659	6.490724	719	6.577861	779	6.658011	830	6.732211	899	6.801283
660	6.492240	720	6.579251	780	6.659294	840	6.733402	900	6.802395

No.	Log.	No.	Log.	No.	Log.	No.	Log.	No.	Log.
901	6.803505	961	6.867974	1021	6.928538	1081	6.985642	1141	7.039660
902	6.804614	962	6.869014	1022	6.929517	1082	6.986566	1142	7.040536
903	6.805723	963	6.870053	1023	6.930495	1083	6.987490	1143	7.041412
904	6.806829	964	6.871091	1024	6.931472	1084	6.988413	1144	7.042286
905	6.807935	965	6.872128	1025	6.932448	1085	6.989335	1145	7.043160
906	6.809039	966	6.873164	1026	6.933423	1086	6.990257	1146	7.044033
907	6.810143	967	6.874199	1027	6.934397	1087	6.991177	1147	7.044905
908	6.811244	968	6.875232	1028	6.935370	1088	6.992096	1148	7.045777
909	6.812345	969	6.876265	1029	6.936343	1089	6.993015	1149	7.046647
910	6.813445	970	6.877296	1030	6.937314	1090	6.993933	1150	7.047517
911	6.814543	971	6.878327	1031	6.938285	1091	6.994850	1151	7.048386
912	6.815640	972	6.879356	1032	6.939254	1092	6.995766	1152	7.049255
913	6.816736	973	6.880384	1033	6.940223	1093	6.996682	1153	7.050123
914	6.817831	974	6.881411	1034	6.941190	1094	6.997596	1154	7.050989
915	6.818924	975	6.882438	1035	6.942157	1095	6.998510	1155	7.051856
916	6.820016	976	6.883463	1036	6.943122	1096	6.999423	1156	7.052721
917	6.821107	977	6.884487	1037	6.944087	1097	7.000335	1157	7.053586
918	6.822197	978	6.885510	1038	6.945051	1098	7.001246	1158	7.054450
919	6.823286	979	6.886532	1039	6.946014	1099	7.002156	1159	7.055313
920	6.824374	980	6.887553	1040	6.946976	1100	7.003066	1160	7.056175
921	6.825460	981	6.888573	1041	6.947937	1101	7.003974	1161	7.057037
922	6.826545	982	6.889591	1042	6.948897	1102	7.004882	1162	7.057898
923	6.827629	983	6.890609	1043	6.949856	1103	7.005789	1163	7.058758
924	6.828712	984	6.891626	1044	6.950815	1104	7.006695	1164	7.059618
925	6.829794	985	6.892642	1045	6.951772	1105	7.007601	1165	7.060476
926	6.830874	986	6.893656	1046	6.952729	1106	7.008505	1166	7.061334
927	6.831954	987	6.894670	1047	6.953684	1107	7.009409	1167	7.062192
928	6.833032	988	6.895683	1048	6.954639	1108	7.010312	1168	7.063048
929	6.834109	989	6.896694	1049	6.955593	1109	7.011214	1169	7.063904
930	6.835185	990	6.897705	1050	6.956545	1110	7.012115	1170	7.064759
931	6.836259	991	6.898715	1051	6.957497	1111	7.013016	1171	7.065613
932	6.837333	992	6.899723	1052	6.958448	1112	7.013916	1172	7.066467
933	6.838405	993	6.900731	1053	6.959399	1113	7.014814	1173	7.067320
934	6.839476	994	6.901737	1054	6.960348	1114	7.015712	1174	7.068172
935	6.840547	995	6.902743	1055	6.961296	1115	7.016610	1175	7.069023
936	6.841616	996	6.903747	1056	6.962244	1116	7.017506	1176	7.069874
937	6.842683	997	6.904751	1057	6.963190	1117	7.018402	1177	7.070724
938	6.843750	998	6.905753	1058	6.964136	1118	7.019297	1178	7.071573
939	6.844816	999	6.906755	1059	6.965080	1119	7.020191	1179	7.072422
940	6.845880	1000	6.907755	1060	6.966024	1120	7.021084	1180	7.073270
941	6.846943	1001	6.908755	1061	6.966967	1121	7.021976	1181	7.074117
942	6.848005	1002	6.909753	1062	6.967909	1122	7.022868	1182	7.074963
943	6.849066	1003	6.910751	1063	6.968850	1123	7.023759	1183	7.075809
944	6.850126	1004	6.911747	1064	6.969791	1124	7.024649	1184	7.056654
945	6.851185	1005	6.912743	1065	6.970730	1125	7.025538	1185	7.077498
946	6.852243	1006	6.913737	1066	6.971669	1126	7.026427	1186	7.078342
947	6.853299	1007	6.914731	1067	6.972606	1127	7.027315	1187	7.079184
948	6.854354	1008	6.915723	1068	6.973543	1128	7.028201	1188	7.080027
949	6.855409	1009	6.916715	1069	6.974479	1129	7.029088	1189	7.080863
950	6.856462	1010	6.917706	1070	9.975414	1130	7.029973	1190	7.081709
951	6.857514	1011	6.918695	1071	6.976348	1131	7.030858	1191	7.082549
952	6.858565	1012	6.919684	1072	6.977281	1132	7.031741	1192	7.083388
953	6.859615	1013	6.920672	1073	6.978214	1133	7.032624	1193	7.084226
954	6.860664	1014	6.921658	1074	6.979145	1134	7.033507	1194	7.085064
955	6.861711	1015	6.922644	1075	6.980076	1135	7.034388	1195	7.085902
956	6.862758	1016	6.923629	1076	6.981006	1136	7.035269	1196	7.086738
957	6.863803	1017	6.924612	1077	6.981935	1137	7.036149	1197	7.087574
958	6.864848	1018	6.925595	1078	6.982863	1138	7.037028	1198	7.088409
959	6.865891	1019	6.926577	1079	6.983790	1139	7.037906	1199	7.089243
960	6.866933	1020	6.927558	1080	6.984716	1140	7.038784	1200	7.090077

No.	Log.	No.	Log.	No.	Log.	No.	Log.	No.	Log.
1 1/10	.095310	2 4/5	1.029619	4 5/8	1.531477	6 2/5	1.856298	8 1/4	2.110213
1 1/8	.117784	2 4/5	1.056053	4 7/10	1.547563	6 1/2	1.871802	8 3/10	2.116255
1 1/4	.182321	2 9/10	1.064711	4 3/4	1.558145	6 3/5	1.887070	8 3/8	2.125251
1 1/4	.223143	3 1/10	1.131402	4 4/5	1.568616	6 5/8	1.890851	8 1/2	2.128231
1 3/10	.262364	3 1/8	1.139434	4 5/6	1.584121	6 7/10	1.902108	8 1/2	2.140066
1 1/3	.318454	3 1/5	1.163151	4 9/10	1.589235	6 3/4	1.909543	8 3/5	2.151762
1 3/8	.336472	3 1/4	1.178655	5 1/10	1.629241	6 4/5	1.916923	8 3/5	2.154665
1 2/5	.405465	3 3/10	1.193922	5 1/8	1.634131	6 5/6	1.927892	8 7/10	2.163323
1 1/2	.470003	3 3/8	1.216396	5 1/4	1.648659	6 9/10	1.931521	8 3/4	2.169054
1 1/2	.485506	3 2/5	1.223775	5 1/2	1.658228	7 1/10	1.960095	8 4/5	2.174752
1 7/10	.530628	3 1/2	1.252763	5 3/10	1.667707	7 1/8	1.963610	8 7/8	2.183237
1 3/4	.559615	3 3/4	1.280934	5 3/8	1.681757	7 1/4	1.974081	8 9/10	2.186051
1 4/5	.587786	3 3/5	1.287854	5 2/5	1.686399	7 1/4	1.981001	9 1/10	2.208274
1 5/6	.628608	3 7/10	1.308333	5 1/2	1.704748	7 3/10	1.987874	9 1/8	2.211018
1 9/10	.641853	3 3/4	1.321756	5 5/8	1.722767	7 3/8	1.998096	9 1/4	2.219203
2 1/10	.741937	3 4/5	1.335001	5 5/8	1.727222	7 2/5	2.001480	9 1/4	2.224624
2 1/8	.753812	3 7/8	1.354546	5 7/10	1.740466	7 1/2	2.014903	9 3/10	2.230014
2 1/4	.788457	3 9/10	1.360976	5 3/4	1.749200	7 3/4	2.028148	9 3/8	2.238046
2 1/4	.810930	4 1/10	1.410987	5 4/5	1.757858	7 3/5	2.031433	9 1/2	2.240710
2 3/10	.832909	4 1/8	1.417066	5 5/6	1.770706	7 7/10	2.041220	9 1/2	2.251292
2 3/8	.864998	4 1/4	1.435088	5 9/10	1.774952	7 3/4	2.047693	9 3/5	2.261763
2 2/5	.875468	4 1/4	1.446919	6 1/10	1.808289	7 4/5	2.054124	9 3/5	2.264364
2 1/2	.916290	4 3/10	1.458615	6 1/8	1.812378	7 5/6	2.063694	9 7/10	2.272126
2 3/4	.955511	4 3/8	1.475906	6 1/4	1.824549	7 9/10	2.066863	9 3/4	2.277267
2 3/4	.965080	4 2/5	1.481605	6 1/4	1.832581	8 1/10	2.091864	9 4/5	2.282382
2 7/10	.993252	4 1/2	1.504077	6 3/10	1.840550	8 1/8	2.094945	9 7/8	2.290006
2 3/4	1.011601	4 3/5	1.526056	6 3/8	1.852384	8 1/5	2.104134	9 9/10	2.292535

TABLE X.—Reduction of Latitude—Angle of the Vertical.

Lat.	Angles.	Lat.	Angles.	Lat.	Angles.	Lat.	Angles.
0°	0′ 0″	23°	8′ 14″	46°	11′ 28″	69°	7′ 42″
1	0 24	24	8 31	47	11 27	70	7 24
2	0 48	25	8 47	48	11 25	71	7 5
3	1 12	26	9 2	49	11 22	72	6 46
4	1 36	27	9 16	50	11 19	73	6 26
5	1 59	28	9 30	51	11 14	74	6 6
6	2 23	29	9 43	52	11 9	75	5 45
7	2 46	30	9 55	53	11 3	76	5 24
8	3 9	31	10 7	54	10 56	77	5 3
9	3 32	32	10 18	55	10 48	78	4 41
10	3 55	33	10 28	56	10 39	79	4 19
11	4 17	34	10 38	57	10 30	80	3 56
12	4 39	35	10 46	58	10 20	81	3 34
13	5 1	36	10 54	59	10 9	82	3 10
14	5 22	37	11 1	60	9 57	83	2 47
15	5 43	38	11 8	61	9 45	84	2 24
16	6 4	39	11 13	62	9 32	85	2 0
17	6 24	40	11 18	63	9 18	86	1 36
18	6 44	41	11 22	64	9 4	87	1 12
19	7 3	42	11 25	65	8 49	88	0 48
20	7 22	43	11 27	66	8 33	89	0 24
21	7 40	44	11 28	67	8 17	90	0 0
22	7 57	45	11 29	68	8 0		

TABLE XI.

REFRACTION OF CELESTIAL OBJECTS.

App. Alt.	Refraction		App. Alt.	Refraction		App. Alt.	Refraction	
	of a *	− Par. ⊙		of a *	− Par. ⊙		of a *	− Par. ⊙
5° 0′	9′ 54″	9′ 45″	6° 0′	8′ 30″	8′ 21″	7° 0′	7′ 25″	7′ 16″
1	9 53	9 44	1	8 29	8 20	1	7 24	7 15
2	9 51	9 42	2	8 27	8 19	2	7 23	7 14
3	9 49	9 41	3	8 26	8 18	3	7 22	7 13
4	9 48	9 39	4	8 25	8 16	4	7 21	7 12
5	9 46	9 37	5	8 24	8 15	5	7 20	7 11
6	9 45	9 36	6	8 23	8 14	6	7 19	7 10
7	9 43	9 34	7	8 22	8 13	7	7 18	7 9
8	9 41	9 33	8	8 20	8 12	8	7 17	7 8
5 9	9 40	9 31	6 9	8 19	8 11	7 9	7 16	7 7
10	9 38	9 30	10	8 18	8 9	10	7 15	7 7
11	9 37	9 28	11	8 17	8 8	11	7 14	7 6
12	9 35	9 26	12	8 16	8 7	12	7 13	7 5
13	9 34	9 25	13	8 15	8 6	13	7 13	7 4
14	9 32	9 23	14	8 13	8 5	14	7 12	7 3
15	9 31	9 23	15	8 12	8 4	15	7 11	7 2
16	9 29	9 20	16	8 11	8 2	16	7 10	7 1
17	9 28	9 19	17	8 10	8 1	17	7 9	7 0
18	9 26	9 17	18	8 9	8 0	18	7 8	6 59
5 19	9 25	9 16	6 19	8 8	7 59	7 19	7 7	6 58
20	9 23	9 15	20	8 7	7 58	20	7 6	6 58
21	9 22	9 13	21	8 5	7 57	21	7 5	6 57
22	9 20	9 12	22	8 4	7 56	22	7 4	6 56
23	9 19	9 10	23	8 3	7 55	23	7 4	6 55
24	9 18	9 9	24	8 2	7 53	24	7 3	6 54
25	9 16	9 7	25	8 1	7 52	25	7 2	6 53
26	9 15	9 6	26	8 0	7 51	26	7 1	6 52
27	9 13	9 4	27	7 59	7 50	27	7 0	6 51
28	9 12	9 3	28	7 58	7 49	28	6 59	6 51
5 29	9 10	9 2	6 29	7 57	7 48	7 29	6 58	6 50
30	9 9	9 0	30	7 56	7 47	30	6 58	6 49
31	9 8	8 59	31	7 54	7 46	31	6 57	6 48
32	9 6	8 57	32	7 53	7 45	32	6 56	6 47
33	9 5	8 56	33	7 52	7 44	33	6 55	6 46
34	9 3	8 55	34	7 51	7 43	34	6 54	6 46
35	9 2	8 53	35	7 50	7 42	35	6 54	6 45
36	9 1	8 52	36	7 49	7 40	36	6 53	6 44
37	8 59	8 51	37	7 48	7 39	37	6 52	6 43
38	8 58	8 49	38	7 47	7 38	38	6 51	6 42
5 39	8 57	8 48	6 39	7 46	7 37	39	6 50	6 42
40	8 55	8 47	40	7 45	7 36	40	6 50	6 41
41	8 54	8 45	41	7 44	7 35	41	6 49	6 40
42	8 53	8 44	42	7 43	7 34	42	6 48	6 39
43	8 51	8 43	43	7 42	7 33	43	6 47	6 39
44	8 50	8 41	44	7 41	7 32	44	6 46	6 38
45	8 49	8 40	45	7 40	7 31	45	6 46	6 37
46	8 47	8 39	46	7 39	7 30	46	6 45	6 36
47	8 46	8 37	47	7 38	7 29	47	6 44	6 35
48	8 45	8 36	48	7 37	7 28	48	6 43	6 35
5 49	8 44	8 35	6 49	7 36	7 27	7 49	6 43	6 34
50	8 42	8 34	50	7 35	7 26	50	6 42	6 33
51	8 41	8 32	51	7 34	7 25	51	6 41	6 32
52	8 40	8 31	52	7 33	7 24	52	6 40	6 32
53	8 38	8 30	53	7 32	7 23	53	6 40	6 31
54	8 37	8 29	54	7 31	7 22	54	6 39	6 30
55	8 36	8 27	55	7 30	7 21	55	6 38	6 29
56	8 35	8 26	56	7 29	7 20	56	6 37	6 29
57	8 34	8 25	57	7 28	7 19	57	6 37	6 28
58	8 32	8 24	58	7 27	7 18	58	6 36	6 27
5 59	8 31	8 22	6 59	7 26	7 17	7 59	6 35	6 26

App. Alt.	Refraction of a ✱	Refraction − Par. ☉	App. Alt.	Refraction of a ✱	Refraction − Par. ☉	App. Alt.	Refraction of a ✱	Refraction − Par. ☉
8° 0	6′ 34″	6′ 26″	9° 0′	5′ 54″	5′ 45″	10° 0′	5′ 20″	5′ 11″
1	6 34	6 25	1	5 53	5 44	2	5 19	5 10
2	6 33	6 24	2	5 52	5 44	4	5 18	5 9
3	6 32	6 23	3	5 52	5 43	6	5 17	5 8
4	6 31	6 23	4	6 51	5 42	8	5 16	5 7
5	6 31	6 22	5	5 50	5 42	10	5 15	5 6
6	6 30	6 21	6	5 50	5 41	12	5 14	5 5
7	6 29	6 21	7	5 49	5 41	14	5 13	5 4
8	6 28	6 20	8	5 49	5 40	16	5 12	5 3
8 9	6 28	6 19	9 9	5 48	5 39	10 18	5 11	5 2
10	6 27	6 18	10	5 47	5 39	20	5 10	5 1
11	6 26	6 18	11	5 47	5 38	22	5 9	5 0
12	6 26	6 17	12	5 46	5 37	24	5 8	4 59
13	6 25	6 16	13	5 46	5 37	26	5 7	4 58
14	6 24	6 15	14	5 45	5 36	28	5 6	4 57
15	6 23	6 15	15	5 44	5 36	30	5 5	4 56
16	6 23	6 14	16	5 44	5 35	32	5 4	4 55
17	6 22	6 13	17	5 43	5 35	34	5 3	4 54
18	6 21	6 13	18	5 43	5 34	36	5 2	4 53
8 19	6 21	6 12	9 19	5 42	5 33	10 38	5 1	4 53
20	6 20	6 11	20	5 41	5 33	40	5 0	4 52
21	6 19	6 10	21	5 41	5 32	42	4 59	4 51
22	6 19	6 10	22	5 40	5 32	44	4 58	4 50
23	6 18	6 9	23	5 40	5 31	46	4 58	4 49
24	6 17	6 8	24	5 39	5 30	48	4 57	4 48
25	6 16	6 8	25	5 39	5 30	50	4 56	4 47
26	6 16	6 7	26	5 38	5 29	52	4 55	4 46
27	6 15	6 6	27	5 37	5 29	54	4 54	4 46
28	6 14	6 6	28	5 37	5 28	56	4 53	4 45
8 29	6 14	6 5	9 29	5 36	5 28	10 58	4 52	4 44
30	6 13	6 4	30	5 36	5 27	11 0	4 52	4 43
31	6 12	6 4	31	5 35	5 26	2	4 51	4 42
32	6 12	6 3	32	5 35	5 26	4	4 50	4 41
33	6 11	6 2	33	5 34	5 25	6	4 49	4 41
34	6 10	6 2	34	5 34	5 25	8	4 48	4 40
35	6 10	6 1	35	5 33	5 24	10	4 48	4 39
36	6 9	6 0	36	5 32	5 24	12	4 47	4 38
37	6 8	6 0	37	5 32	5 23	14	4 46	4 37
38	6 8	5 59	38	5 31	5 23	16	4 45	4 37
8 39	6 7	5 58	9 39	5 31	5 22	11 18	4 44	4 36
40	6 6	5 58	40	5 30	5 22	20	4 44	4 35
41	6 6	5 57	41	5 30	5 21	22	4 43	4 34
42	6 5	5 56	42	5 29	5 20	24	4 42	4 33
43	6 4	5 56	43	5 29	5 20	26	4 41	4 33
44	6 4	5 55	44	5 28	5 19	28	4 40	4 32
45	6 3	5 54	45	5 28	5 19	30	4 40	4 31
46	6 2	5 54	46	5 27	5 18	32	4 39	4 30
47	6 2	5 53	47	5 27	5 18	34	4 38	4 29
48	6 1	5 52	48	5 26	5 17	36	4 37	4 29
8 49	6 0	5 52	9 49	5 25	5 17	11 38	4 36	4 28
50	6 0	5 51	50	5 25	5 16	40	4 36	4 27
51	5 59	5 51	51	5 24	5 16	42	4 35	4 26
52	5 59	5 50	52	5 24	5 15	44	4 34	4 25
53	5 58	5 49	53	5 23	5 15	46	4 33	4 25
54	5 57	5 49	54	5 23	5 14	48	4 33	4 24
55	5 57	5 48	55	5 22	5 14	50	4 32	4 23
56	5 56	5 47	56	5 22	5 13	52	4 31	4 22
57	5 55	5 47	57	5 21	5 13	54	4 30	4 22
58	5 55	5 46	58	5 21	5 12	56	4 29	4 21
8 59	5 54	5 45	9 59	5 20	5 12	11 58	4 29	4 20

App. Alt.	Refraction		App. Alt.	Refraction		App. Alt.	Refraction	
	of a *	− Par. ⊙		of a *	− Par. ⊙		of a *	− Par. ⊙
12° 0′	4′ 28″	4 19″	14° 0′	3′ 50″	3 41	17° 0′	3′ 8″	3′ 0″
2	4 27	4 19	3	3 49	3 40	5	3 8	2 59
4	4 26	4 18	6	3 48	3 40	10	3 7	2 58
6	4 26	4 17	9	3 47	3 39	15	3 6	2 57
8	4 25	4 16	12	3 47	3 38	20	3 5	2 56
10	4 24	4 16	15	3 46	3 37	25	3 4	2 55
12	4 24	4 15	18	3 45	3 36	30	3 3	2 54
14	4 23	4 14	21	3 44	3 36	35	3 2	2 54
16	4 22	4 13	24	3 43	3 35	40	3 1	2 53
12 18	4 21	4 13	14 27	3 43	3 34	17 45	3 0	2 52
20	4 21	4 12	30	3 42	3 33	50	2 59	2 51
22	4 20	4 11	33	3 41	3 33	55	2 58	2 50
24	4 19	4 11	36	3 40	3 32	18 0	2 58	2 49
26	4 19	4 10	39	3 39	3 31	5	2 57	2 48
28	4 18	4 9	42	3 39	3 30	10	2 56	2 47
30	4 17	4 9	45	3 38	3 29	15	2 55	2 47
32	4 16	4 8	48	3 37	3 29	20	2 54	2 46
34	4 16	4 7	51	3 36	3 28	25	2 53	2 45
36	4 15	4 7	54	3 36	3 27	30	2 52	2 44
12 38	4 14	4 6	14 57	3 35	3 26	18 35	2 52	2 43
40	4 14	4 5	15 0	3 34	3 26	40	2 51	2 43
42	4 13	4 5	3	3 34	3 25	45	2 50	2 42
44	4 12	4 4	6	3 33	3 24	50	2 49	2 41
46	4 12	4 3	9	3 32	3 24	55	2 48	2 40
48	4 11	4 3	12	3 31	3 23	19 0	2 48	2 39
50	4 11	4 2	15	3 31	3 22	5	2 47	2 39
52	4 10	4 1	18	3 30	3 21	10	2 46	2 38
54	4 9	4 1	21	3 29	3 21	15	2 45	2 37
56	4 9	4 0	24	3 29	3 20	20	2 45	2 36
12 58	4 8	3 59	15 27	3 28	3 19	19 25	2 44	2 36
13 0	4 7	3 59	30	3 27	3 19	30	2 43	2 35
2	4 7	3 58	33	3 27	3 18	35	2 42	2 34
4	4 6	3 58	36	3 26	3 17	40	2 42	2 33
6	4 6	3 57	39	3 25	3 17	45	2 41	2 33
8	4 5	3 56	42	3 25	3 16	50	2 40	2 32
10	4 4	3 56	45	3 24	3 15	55	2 39	2 31
12	4 4	3 55	48	3 23	3 15	20 0	2 39	2 30
14	4 3	3 55	51	3 23	3 14	5	2 38	2 30
16	4 3	3 54	54	3 22	3 13	10	2 37	2 29
13 18	4 2	3 53	15 57	3 21	3 13	20 15	2 37	2 28
20	4 1	3 53	16 0	3 21	3 12	20	2 36	2 28
22	4 1	3 52	3	3 20	3 11	25	2 35	2 27
24	4 0	3 52	6	3 19	3 11	30	2 35	2 26
26	4 0	3 51	9	3 19	3 10	35	2 34	2 26
28	3 59	3 50	12	3 18	3 10	40	2 33	2 25
30	3 58	3 50	15	3 17	3 9	45	2 33	2 24
32	3 58	3 49	18	3 17	3 8	50	2 32	2 24
34	3 57	3 49	21	3 16	3 8	55	2 31	2 23
36	3 57	3 48	24	3 16	3 7	21 0	2 31	2 22
13 38	3 56	3 47	16 27	3 15	3 7	21 5	2 30	2 22
40	3 55	3 47	30	3 14	3 6	10	2 29	2 21
42	3 55	3 46	33	3 14	3 5	15	2 29	2 20
44	3 54	3 46	36	3 13	3 5	20	2 28	2 20
46	3 54	3 45	39	3 13	3 4	25	2 27	2 19
48	3 53	3 45	42	3 12	3 4	30	2 27	2 19
50	3 53	3 44	45	3 11	3 3	35	2 26	2 18
52	3 52	3 43	48	3 11	3 2	40	2 26	2 17
54	3 51	3 43	51	3 10	3 2	45	2 25	2 17
56	3 51	3 42	54	3 10	3 1	50	2 24	2 16
13 58	3 50	3 42	16 57	3 9	3 1	21 55	2 24	2 16

App. Alt.	Refraction of a ✱	Refraction − Par. ⊙	App. Alt.	Refraction of a ✱	Refraction − Par. ⊙	App. Alt.	Refraction of a ✱	Refraction − Par. ⊙
22° 0′	2′ 23″	2′ 15″	32° 0′	1′ 33″	1′ 26″	52° 0′	0′ 45″	0′ 40″
10	2 22	2 14	20	1 32	1 24	30	0 45	0 39
20	2 21	2 13	40	1 31	1 23	53 0	0 44	0 39
30	2 20	2 12	33 0	1 30	1 22	30	0 43	0 38
40	2 19	2 10	20	1 28	1 21	54 0	0 42	0 37
50	2 18	2 9	40	1 27	1 20	30	0 41	0 36
23 0	2 16	2 8	34 0	1 26	1 19	55 0	0 41	0 36
10	2 16	2 7	20	1 25	1 18	30	0 40	0 35
20	2 14	2 6	40	1 24	1 17	56 0	0 39	0 34
23 30	2 13	2 5	35 0	1 23	1 16	56 30	0 38	0 34
40	2 12	2 4	20	1 22	1 15	57 0	0 38	0 33
50	2 11	2 3	40	1 21	1 14	30	0 37	0 32
24 0	2 10	2 2	36 0	1 20	1 13	58 0	0 36	0 32
10	2 9	2 1	20	1 19	1 12	30	0 36	0 31
20	2 8	2 0	40	1 18	1 11	59 0	0 35	0 30
30	2 7	1 59	37 0	1 17	1 10	30	0 34	0 30
40	2 6	1 58	20	1 16	1 9	60 0	0 34	0 29
50	2 5	1 57	40	1 15	1 8	30	0 33	0 28
25 0	2 4	1 56	38 0	1 14	1 7	61 0	0 32	0 28
25 10	2 3	1 55	38 20	1 13	1 7	61 30	0 32	0 27
20	2 2	1 55	40	1 13	1 6	62 0	0 31	0 27
30	2 1	1 54	39 0	1 12	1 5	30	0 30	0 26
40	2 1	1 53	20	1 11	1 4	63 0	0 30	0 26
50	2 0	1 52	40	1 10	1 3	30	0 29	0 25
26 0	1 59	1 51	40 0	1 9	1 3	64 0	0 28	0 24
10	1 58	1 50	20	1 8	1 2	30	0 28	0 24
20	1 57	1 49	40	1 8	1 1	65 0	0 27	0 23
30	1 56	1 49	41 0	1 7	1 0	30	0 26	0 23
40	1 55	1 48	20	1 6	1 0	66 0	0 26	0 22
26 50	1 55	1 47	41 40	1 5	0 59	66 30	0 25	0 22
27 0	1 54	1 46	42 0	1 5	0 58	67 0	0 25	0 21
10	1 53	1 45	20	1 4	0 57	30	0 24	0 21
20	1 52	1 44	40	1 3	0 57	68 0	0 23	0 20
30	1 51	1 44	43 0	1 2	0 56	30	0 23	0 20
40	1 51	1 43	20	1 2	0 55	69 0	0 22	0 19
50	1 50	1 42	40	1 1	0 55	30	0 22	0 19
28 0	1 49	1 41	44 0	1 0	0 54	70 0	0 21	0 18
10	1 48	1 41	20	1 0	0 53	30	0 21	0 18
20	1 48	1 40	40	0 59	0 53	71 0	0 20	0 17
28 30	1 47	1 39	45 0	0 58	0 52	71 30	0 19	0 17
40	1 46	1 39	20	0 57	0 51	72 0	0 19	0 16
50	1 45	1 38	40	0 57	0 51	30	0 18	0 16
29 0	1 45	1 37	46 0	0 56	0 50	73 0	0 18	0 15
10	1 44	1 36	20	0 55	0 49	74 0	0 17	0 14
20	1 43	1 36	40	0 55	0 49	75 0	0 16	0 13
30	1 43	1 35	47 0	0 54	0 48	76 0	0 14	0 12
40	1 42	1 34	20	0 54	0 48	77 0	0 13	0 11
50	1 41	1 34	40	0 53	0 47	78 0	0 12	0 11
30 0	1 41	1 33	48 0	0 52	0 46	79 0	0 11	0 10
30 10	1 40	1 32	48 20	0 52	0 46	80 0	0 10	0 9
20	1 39	1 32	40	0 51	0 45	81 0	0 9	0 8
30	1 39	1 31	49 0	0 51	0 45	82 0	0 8	0 7
40	1 38	1 30	20	0 50	0 44	83 0	0 7	0 6
50	1 37	1 30	40	0 49	0 44	84 0	0 6	0 5
31 0	1 37	1 29	50 0	0 49	0 43	85 0	0 5	0 4
10	1 36	1 29	20	0 48	0 43	86 0	0 4	0 3
20	1 35	1 28	40	0 48	0 42	87 0	0 3	0 3
30	1 35	1 27	51 0	0 47	0 42	88 0	0 2	0 2
40	1 34	1 27	20	0 47	0 41	89 0	0 1	0 1
31 50	1 34	1 26	51 40	0 46	0 41	90 0	0 0	0 0

TABLE XII.

DEPRESSION (DIP) AND DISTANCE OF HORIZON.

TABLE XIII.

CONVERSION OF NAUTICAL VELOCITIES.

TABLE XIV.

MULTIPLES FOR CONVERTING LOGARITHMS.

Height of Eye Index.	Depression.	Distance in Miles.	Height of Eye Index.	Depression.	Distance in Miles.	Height of Eye Index.	Depression.	Distance in Miles.
1	0 55.5	1.2	26	4 53	6.1	51	6 57	8.5
2	1 22.7	1.7	27	5 2.8	6.2	52	7 2	8.6
3	1 41	2.1	28	5 9.6	6.3	53	7 6	8.6
4	1 57	2.4	29	5 15	6.4	54	7 10	8.7
5	2 10.8	2.6	30	5 20.5	6.5	55	7 13.9	8.8
6	2 23	2.9	31	5 25.7	6.6	56	7 17.8	8.9
7	2 34.8	3.1	32	5 31	6.7	57	7 21.7	9.0
8	2 45.4	3.4	33	5 36	6.8	58	7 25.6	9.0
9	2 55.5	3.6	34	5 41	6.9	59	7 29	9.1
10	3 4.9	3.8	35	5 46.7	7.0	60	7 33	9.2
11	3 14	3.9	36	5 51	7.1	65	7 51.7	9.4
12	3 22	4.1	37	5 55.8	7.2	70	8 8.8	9.9
13	3 31	4.3	38	6 0.6	7.3	75	8 26.7	10.3
14	3 38.8	4.4	39	6 4.9	7.4	80	8 45.5	10.6
15	3 46.6	4.6	40	6 10	7.5	85	8 59	10.9
16	3 54	4.7	41	6 14.6	7.6	90	9 15	11.3
17	4 1	4.9	42	6 19	7.7	95	9 30	11.5
18	4 8	5.0	43	6 21.6	7.8	100	9 45	11.9
19	4 15	5.2	44	6 28	7.9	110	10 13.8	12.5
20	4 21.7	5.3	45	6 32	8.0	120	10 40.8	13.0
21	4 28	5.5	46	6 38	8.1	130	11 7	13.5
22	4 34	5.6	47	6 41.7	8.1	140	11 31.8	14.1
23	4 40	5.7	48	6 45	8.2	150	11 56	14.6
24	4 47	5.8	49	6 49.5	8.3	160	12 19.8	15.0
25	4 52.5	5.9	50	6 53.7	8.4	200	13 47	16.8

TABLE XIII.—Conversion of Nautical Velocities.

No.	Knots per hr. into ft. per second.	No.	Knots per hr. into ft. per second.	No.	Ft. per sec. into Knots per hour.	No.	Ft. per sec. into Knots per hour.
1	1.688	6	10.127	1	0.592	6	3.555
2	3.376	7	11.815	2	1.185	7	4.147
3	5.064	8	13.503	3	1.777	8	4.740
4	6.752	9	15.191	4	2.370	9	5.332
5	8.439	10	16.879	5	2.962	10	5.925

TABLE XIV.—Multiples for Converting Logarithms.

No.	Common into Natural or Hyperbolic.	No.	Common into Natural or Hyperbolic.	No.	Natural or Hyperbolic into Common.	No.	Natural or Hyperbolic into Common.
1	2.302585	6	13.815510	1	0.434294	6	2.605767
2	4.605170	7	16.118096	2	0.868589	7	3.040061
3	6.907755	8	18.420681	3	1.302883	8	3.474356
4	9.210340	9	20.723266	4	1.737178	9	3.908650
5	11.512925	10	23.025851	5	2.171472	10	4.342945

TABLE XV.

CONVERSION OF DEGREES INTO HOURS, ETC.

Degrees.						Minutes.		Seconds.	
	h. m.		h. m.		h. m.		m. s.		s.
1°	0 4	61°	4 4	121°	8 4	1′	0 4	1″	0.07
2	0 8	62	4 8	122	8 8	2	0 8	2	0.13
3	0 12	63	4 12	123	8 12	3	0 12	3	0.20
4	0 16	64	4 16	124	8 16	4	0 16	4	0.27
5	0 20	65	4 20	125	8 20	5	0 20	5	0.33
6	0 24	66	4 24	126	8 24	6	0 24	6	0.40
7	0 28	67	4 28	127	8 28	7	0 28	7	0.47
8	0 32	68	4 32	128	8 32	8	0 32	8	0.53
9	0 36	69	4 36	129	8 36	9	0 36	9	0.60
10	0 40	70	4 40	130	8 40	10	0 40	10	0.67
11	0 44	71	4 44	131	8 44	11	0 44	11	0.73
12	0 48	72	4 48	132	8 48	12	0 48	12	0.80
13	0 52	73	4 52	133	8 52	13	0 52	13	0.87
14	0 56	74	4 56	134	8 56	14	0 56	14	0.93
15	1 0	75	5 0	135	9 0	15	1 0	15	1.00
16	1 4	76	5 4	136	9 4	16	1 4	16	1.07
17	1 8	77	5 8	137	9 8	17	1 8	17	1.13
18	1 12	78	5 12	138	9 12	18	1 12	18	1.20
19	1 16	79	5 16	139	9 16	19	1 16	19	1.27
20	1 20	80	5 20	140	9 20	20	1 20	20	1.33
21	1 24	81	5 24	141	9 24	21	1 24	21	1.40
22	1 28	82	5 28	142	9 28	22	1 28	22	1.47
23	1 32	83	5 32	143	9 32	23	1 32	23	1.53
24	1 36	84	5 36	144	9 36	24	1 36	24	1.60
25	1 40	85	5 40	145	9 40	25	1 40	25	1.67
26	1 44	86	5 44	146	9 44	26	1 44	26	1.73
27	1 48	87	5 48	147	9 48	27	1 48	27	1.80
28	1 52	88	5 52	148	9 52	28	1 52	28	1.87
29	1 56	89	5 56	149	9 56	29	1 56	29	1.93
30	2 0	90	6 0	150	10 0	30	2 0	30	2.00
31	2 4	91	6 4	151	10 4	31	2 4	31	2.07
32	2 8	92	6 8	152	10 8	32	2 8	32	2.13
33	2 12	93	6 12	153	10 12	33	2 12	33	2.20
34	2 16	94	6 16	154	10 16	34	2 16	34	2.27
35	2 20	95	6 20	155	10 20	35	2 20	35	2.33
36	2 24	96	6 24	156	10 24	36	2 24	36	2.40
37	2 28	97	6 28	157	10 28	37	2 28	37	2.47
38	2 32	98	6 32	158	10 32	38	2 32	38	2.53
39	2 36	99	6 36	159	10 36	39	2 36	39	2.60
40	2 40	100	6 40	160	10 40	40	2 40	40	2.67
41	2 44	101	6 44	161	10 44	41	2 44	41	2.73
42	2 48	102	6 48	162	10 48	42	2 48	42	2.80
43	2 52	103	6 52	163	10 52	43	2 52	43	2.87
44	2 56	104	6 56	164	10 56	44	2 56	44	2.93
45	3 0	105	7 0	165	11 0	45	3 0	45	3.00
46	3 4	106	7 4	166	11 4	46	3 4	46	3.07
47	3 8	107	7 8	167	11 8	47	3 8	47	3.13
48	3 12	108	7 12	168	11 12	48	3 12	48	3.20
49	3 16	109	7 16	169	11 16	49	3 16	49	3 27
50	3 20	110	7 20	170	11 20	50	3 20	50	3.33
51	3 24	111	7 24	171	11 24	51	3 24	51	3.40
52	3 28	112	7 28	172	11 28	52	3 28	52	3.47
53	3 32	113	7 32	173	11 32	53	3 32	53	3.53
54	3 36	114	7 36	174	11 36	54	3 36	54	3.60
55	3 40	115	7 40	175	11 40	55	3 40	55	3.67
56	3 44	116	7 44	176	11 44	56	3 44	56	3.73
57	3 48	117	7 48	177	11 48	57	3 48	57	3.80
58	3 52	118	7 52	178	11 52	58	3 52	58	3.87
59	3 56	119	7 56	179	11 56	59	3 56	59	3.93
60	4 0	120	8 0	180	12 0	60	4 0	60	4.00

TABLE XVI.

PARALLAX OF THE PLANETS.

TABLE XVI.—Parallax of the Planets.

App. Alt.	Planet's Horizontal Parallax.												App. Alt.
	1″	2″	3″	4″	5″	6″	7″	8″	9″	10′	20″	30″	
5°	1.0″	2.0″	3.0″	4.0′	5.0″	6.0″	7.0″	8.0″	9.0″	10.0″	19.9″	29.9″	5°
7	1.0	2.0	3.0	4.0	5.0	6.0	6.9	7.9	8.9	9.9	19.8	29.8	7
9	1.0	2.0	3.0	4.0	4.9	6.0	6.9	7.9	8.9	9.9	19.7	29.6	9
11	1.0	2.0	2.9	3.9	4.9	5.9	6.9	7.9	8.8	9.8	19.6	29.4	11
13	1.0	1.9	2.9	3.9	4.9	5.8	6.8	7.8	8.8	9.7	19.5	29.2	13
15	1.0	1.9	2.9	3.8	4.8	5.8	6.8	7.7	8.7	9.7	19.3	29.0	15
17	1.0	1.9	2.9	3.8	4.8	5.7	6.7	7.6	8.6	9.6	19.1	28.7	17
19	0.9	1.9	2.8	3.8	4.7	5.7	6.6	7.6	8.5	9.4	18.9	28.4	19
21	0.9	1.9	2.8	3.7	4.7	5.6	6.5	7.5	8.4	9.3	18.7	28.0	21
23	0.9	1.8	2.8	3.7	4.6	5.5	6.4	7.4	8.3	9.2	18.4	27.6	23
25	0.9	1.8	2.7	3.6	4.5	5.4	6.3	7.3	8.2	9.1	18.1	27.2	25
27	0.9	1.8	2.7	3.6	4.4	5.3	6.2	7.1	8.0	8.9	17.8	26.7	27
29	0.9	1.7	2.6	3.5	4.4	5.2	6.1	7.0	7.9	8.7	17.5	26.2	29
31	0.9	1.7	2.6	3.4	4.3	5.1	6.0	6.9	7.7	8.6	17.1	25.7	31
33	0.8	1.7	2.5	3.4	4.2	5.0	5.9	6.7	7.6	8.4	16.8	25.4	33
35	0.8	1.6	2.5	3.3	4.1	4.9	5.7	6.6	7.4	8.2	16.4	24.6	35
37	0.8	1.6	2.4	3.2	4.0	4.8	5.6	6.4	7.2	8.0	16.0	24.0	37
39	0.8	1.6	2.3	3.1	3.9	4.7	5.4	6.2	7.0	7.8	15.5	23.3	39
41	0.8	1.5	2.3	3.0	3.8	4.5	5.3	6.0	6.8	7.5	15.1	22.6	41
43	0.7	1.5	2.2	2.9	3.6	4.4	5.1	5.9	6.6	7.3	14.6	21.9	43
45	0.7	1.4	2.1	2.8	3.5	4.2	4.9	5.7	6.4	7.1	14.1	21.2	45
47	0.7	1.4	2.0	2.7	3.4	4.1	4.8	5.5	6.1	6.8	13.6	20.5	47
49	0.7	1.3	2.0	2.6	3.3	3.9	4.6	5.2	5.9	6.6	13.1	19.7	49
51	0.6	1.3	1.9	2.5	3.1	3.8	4.4	5.0	5.7	6.3	12.6	18.9	51
53	0.6	1.2	1.8	2.4	3.0	3.8	4.2	4.8	5.4	6.0	12.0	18.0	53
55	0.6	1.1	1.7	2.3	2.9	3.4	4.0	4.6	5.2	5.7	11.5	17.2	55
56	0.6	1.1	1.7	2.2	2.8	3.4	3.9	4.5	5.0	5.6	11.2	16.8	56
57	0.5	1.1	1.6	2.2	2.7	3.3	3.8	4.4	4.9	5.4	10.9	16.4	57
58	0.5	1.1	1.6	2.1	2.6	3.2	3.7	4.2	4.7	5.3	10.6	15.8	58
59	0.5	1.0	1.5	2.1	2.6	3.1	3.6	4.1	4.6	5.1	10.3	15.6	59
60	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	10.0	15.0	60
61	0.5	1.0	1.5	1.9	2.4	2.9	3.4	3.9	4.4	4.8	9.7	14.5	61
62	0.5	0.9	1.4	1.9	2.3	2.8	3.3	3.8	4.2	4.7	9.4	14.1	62
63	0.5	0.9	1.4	1.8	2.3	2.7	3.2	3.6	4.1	4.5	9.1	13.6	63
64	0.4	0.9	1.3	1.8	2.2	2.6	3.1	3.5	3.9	4.4	8.8	13.1	64
65	0.4	0.8	1.3	1.7	2.1	2.5	3.0	3.4	3.8	4.2	8.4	12.7	65
66	0.4	0.8	1.2	1.6	2.0	2.4	2.8	3.3	3.7	4.1	8.1	12.2	66
67	0.4	0.8	1.2	1.6	2.0	2.3	2.7	3.1	3.5	3.9	7.8	11.7	67
68	0.4	0.7	1.1	1.5	1.9	2.2	2.6	3.0	3.4	3.7	7.5	11.2	68
69	0.4	0.7	1.1	1.4	1.8	2.1	2.5	2.9	3.2	3.6	7.2	10.7	69
70	0.3	0.7	1.0	1.4	1.7	2.1	2.4	2.7	3.1	3.4	6.8	10.3	70
71	0.3	0.7	1.0	1.3	1.6	2.0	2.3	2.6	2.9	3.2	6.5	9.8	71
72	0.3	0.6	0.9	1.2	1.5	1.9	2.2	2.5	2.8	3.1	6.2	9.3	72
73	0.3	0.6	0.9	1.2	1.5	1.8	2.0	2.3	2.6	2.9	5.8	8.8	73
74	0.3	0.6	0.8	1.1	1.4	1.7	1.9	2.2	2.5	2.7	5.5	8.3	74
75	0.3	0.5	0.8	1.0	1.3	1.6	1.8	2.1	2.3	2.6	5.2	7.8	75
76	0.2	0.5	0.7	1.0	1.2	1.5	1.7	1.9	2.2	2.4	4.8	7.3	76
77	0.2	0.4	0.7	0.9	1.1	1.3	1.6	1.8	2.0	2.2	4.5	6.7	77
78	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.7	1.9	2.1	4.2	6.2	78
79	0.2	0.4	0.6	0.8	1.0	1.1	1.3	1.5	1.7	1.9	3.8	5.7	79
80	0.2	0.3	0.5	0.7	0.9	1.0	1.2	1.4	1.6	1.7	3.5	5.2	80
81	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	1.6	3.1	4.7	81
82	0.1	0.3	0.4	0.6	0.7	0.8	1.0	1.1	1.2	1.4	2.8	4.2	82
83	0.1	0.2	0.4	0.5	0.6	0.7	1.8	1.0	1.1	1.2	2.4	3.6	83
84	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	2.1	3.1	84
85	0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.7	2.6	85
86	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.6	0.7	1.4	2.1	86
87	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	1.0	1.6	87
88	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.7	1.0	88
89	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.5	89
Alt.	1″	2″	3″	4′	5″	6′	7″	8″	9″	10″	20″	30″	Alt.

TABLE XVII.

DIP OF THE SEA HORIZON.

TABLE XVIII.

REDUCTION OF THE MOON'S EQUATORIAL PARALLAX.

TABLE XIX.

SUN'S PARALLAX.

Height of Eye.	Dip.	Height of Eye.	Dip.	Height of Eye.	Dip.	Height of Eye.	Dip.
	′ ′		′ ″		′ ″		′ ″
1	0 58.5	20	4 21.7	39	6 4.9	58	7 25.6
2	1 22.7	21	4 28	40	6 10	59	7 29
3	1 41	22	4 34	41	6 14.6	60	7 33
4	1 57	23	4 40	42	6 19	65	7 51.7
5	2 10.8	24	4 47	43	6 21.6	70	8 8.8
6	2 23	25	4 52.5	44	6 28	75	8 26.7
7	2 34.8	26	4 58	45	6 32	80	8 45.5
8	2 45.4	27	5 2.8	46	6 38	85	8 59
9	2 55.5	28	5 9.6	47	6 41.7	90	9 15
10	3 4.9	29	5 15	48	6 45	95	9 30
11	3 14	30	5 20.5	49	6 49.5	100	9 45
12	3 22	31	5 25.7	50	6 53.7	110	10 13.8
13	3 31	32	5 31	51	6 57	120	10 40.8
14	3 38.8	33	5 36	52	7 2	130	11 7
15	3 46.6	34	5 41	53	7 6	140	11 31.8
16	3 54	35	5 46.7	54	7 10	150	11 56
17	4 1	36	5 51	55	7 13.9	160	12 19.8
18	4 8	37	5 55.8	56	7 17.8	200	13 47
19	4 15	38	6 0.6	57	7 21.7		

TABLE XVIII.—Reduction of the Moon's Equatorial Parallax.

Lat.	Horizontal Parallax.				
	54	56	58	60	62
°	″	″	″	″	″
4	.1	.1	.1	.1	.1
8	.2	.2	.2	.2	.2
12	.4	.5	.5	.5	.5
16	.8	.8	.9	.9	.9
20	1.3	1.3	1.4	1.4	1.5
24	1.8	1.9	1.9	2	2
28	2.4	2.5	2.6	2.6	2.7
32	3	3.1	3.3	3.4	3.5
36	3.7	3.9	4	4.1	4.3
40	4.5	4.6	4.8	5	5.1
44	5.2	5.4	5.6	5.8	6
48	6	6.2	6.3	6.6	6.8
52	6.7	7	7.2	7.4	7 6
56	7.4	7.7	8	8.2	8 5
60	8.1	8.4	8.7	9	9.3
64	8.7	9.1	9.4	9.7	10
68	9.3	9.6	10	10.3	10.6
72	9.8	10.1	10.4	10.8	11.2
76	10.2	10.6	10.9	11.3	11.7
80	10.5	10.9	11.2	11.6	12
84	10.7	11.1	11.5	11.9	12

TABLE XIX.—Sun's Parallax in Altitude.

Altitudes, . .	0° to 12°	15° to 30°	33° to 39°	42° to 48°	51° to 57°
Parallax, . . .	9″	8″	7″	6″	5″
Altitudes, . .	60° to 66°	69° to 72°	75° to 78°	81° to 84°	87° to 90°
Parallax, . . .	4″	3″	2″	1″	0″

TABLE XX.

AUGMENTATION OF MOON'S SEMI-DIAMETER.

App. Alt.	Moon's Horizontal Semi-diameter.					
	14′ 30″	15′ 0″	15′ 30″	16′ 0″	16′ 30″	17′ 0″
10″ 20 21 22	5″	5″	6″	6″	6″	7″
23 24 25	5	6	6	6	7	7
26 27 28	6	7	7	7	8	8
29 30 31	7	7	8	8	9	9
32 33 34	7	8	8	9	9	10
35 36 37	8	9	9	10	10	11
38 39 40	8	9	10	10	11	12
41 42 43 44 45 45	9	10	11	12	12	13
47 48 49 50 51 52	10	11	12	13	14	14
53 54	11	12	13	13	14	15
55 56 57 58	11	12	13	14	15	16
59 60 61 62 63 64 65 66 67 68 69 70	12	13	14	15	16	17
71 72 73 74 75 76 77 78	13	14	15	16	17	18

TABLE XXI.

TABLE OF THE POINTS OF THE COMPASS.

Table with every Point and Quarter Point of the Compass, giving the Angle with the Meridian.

North.	South.	Points.	° ′ ″	Points.	South.	North.
		0 ¼	2 48 45	0 ¼		
		0 ½	5 37 30	0 ½		
		0 ¾	8 26 15	0 ¾		
N. by E.	S. by W.	1	11 15 0	1	S. by E.	N. by W.
		1 ¼	14 3 45	1 ¼		
		1 ½	16 52 30	1 ½		
		1 ¾	19 41 15	1 ¾		
N.N.E.	S.S.W.	2	22 30 0	2	S.S.E.	N.N.W.
		2 ¼	25 18 45	2 ¼		
		2 ½	28 7 30	2 ½		
		2 ¾	30 56 15	2 ¾		
N.E. by N.	S.W. by S.	3	33 45 0	3	S.E. by S.	N.W. by N.
		3 ¼	36 33 45	3 ¼		
		3 ½	39 22 30	3 ½		
		3 ¾	42 11 15	3 ¾		
N.E.	S.W.	4	45 0 0	4	S.E.	N.W.
		4 ¼	47 48 45	4 ¼		
		4 ½	50 37 30	4 ½		
		4 ¾	53 26 15	4 ¾		
N.E. by E.	S.W. by W.	5	56 15 0	5	S.E. by E.	N.W. by W.
		5 ¼	59 3 45	5 ¼		
		5 ½	61 52 30	5 ½		
		5 ¾	64 41 15	5 ¾		
E.N. E.	W.S.W.	6	67 30 0	6	E.S.E.	W.N.W.
		6 ¼	70 18 45	6 ¼		
		6 ½	73 7 30	6 ½		
		6 ¾	75 56 15	6 ¾		
E. by N.	W. by S.	7	78 45 0	7	E. by S.	W. by N.
		7 ¼	81 33 45	7 ¼		
		7 ½	84 22 30	7 ½		
		7 ¾	87 11 15	7 ¾		
East.	West.	8	90 0 0	8	East.	West.